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### YOUTH AND DEVELOPMENT OF AQUACULTURE AND LIVESTOCK IN AFRICA

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#### Executive Summary

With over 200 million people between the ages 15-24 years, Africa has the most youthful population in the world. Today over half of the population is below 25 years and approximately 11 million young Africans will join the labour market every year for the next decade. A more business oriented and profitable aquaculture and livestock sector can be an attractive livelihood and employment option for youth. Key messages relating to youth employment in these sub-sectors are:

- i. **A profitable and business-oriented aquaculture and livestock sector** can generate employment opportunities for young women and men across the value chain.
- ii. **Governments must create an enabling environment for private sector investment and foster linkages between small and large actors.** This will generate entrepreneurial opportunities for youth either as small-medium scale producers, as out growers to larger

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firms, as service providers across the value chain (input provision, value addition and marketing) or as formal wage employees.

- iii. **Engaging youth in policy dialogue requires their participation and leadership in producers' organization and other mechanisms/institutions of collective action.** This will enable the inclusion of youth concerns into sector development policies, strategies and programmes.
- iv. **Policies and interventions aimed at attracting youth will have to address key barriers to entry such as access to finance, land and other productive resources.** Some of the sector-specific strategies that can be explored are aqua-parks (land and lake-based) for aquaculture, and production of short cycle animals, such as poultry and small ruminants for livestock.
- v. **Invest in the technical, entrepreneurial and management skills and capacity of youth.** Proven capacity building methodologies, such as Farmer Field Schools (FFS) and Junior Farmer Field and Life Schools (JFFLS) can be used for both sub-sectors. In addition, apprenticeships and mentorship opportunities with commercial farmers/entrepreneurs can enhance the business acumen of youth.
- vi. **Facilitate information and knowledge sharing and networking through innovative use of ICT.** The use of social media and online platforms (networking and knowledge) and applications for real-time market and price information transmission can facilitate youth access to information and networking opportunities.

## Youth and Development of Aquaculture and Livestock in Africa

### I. Introduction

1. With over 200 million people between the ages 15-24 years<sup>1</sup>, Africa has the most youthful population in the world. Today over half of the population is below 25 years and approximately 11 million young Africans will join the labour market every year for the next decade. As the youth become more educated, there is a growing divide between the aspirations of young people and the economic, social and lifestyle opportunities available (AfDB 2012, World Bank 2014).
2. Creating decent<sup>2</sup> employment opportunities for this young labour force will be crucial if Africa is to reap its “demographic dividend<sup>3</sup>”. In spite of urbanisation and industrialisation, agriculture is still the single largest employer in Africa. A profitable agriculture sector (including aquaculture and fisheries, forestry and livestock) can create significant employment opportunities for youth.
3. This Information Note looks at two agricultural sub-sectors – aquaculture and livestock. There are several linkages between the two. An example is the use of animal waste for pond fertilization as well as complementarities between animal and fish feed production; this latter being one of the main constraints for both sectors.
4. The main objective of the side event is to discuss with key stakeholders attending the ARC on opportunities and challenges in engaging the youth in aquaculture and livestock sub-sectors. The discussions will focus on practical approaches and measures to engage young people and will include these as key recommendations to the conference.

### II. Youth and Development of Aquaculture

#### II.1. Aquaculture in Africa

5. Aquaculture<sup>4</sup> is a relatively new economic activity in Africa. In 2010, total production in Africa was 1.29 million tons<sup>5</sup>; 72% of which was produced by Egypt, currently the 8th largest producer in the world (FAO 2012a).
6. With supportive policies and investments, other African countries can replicate the Egyptian success. For the first time there are large operations in SSA producing more than 1,000 tons annually in addition to the more market driven small-scale aquaculture businesses. The production in SSA increased six-fold from 55,690 tons in 2000 to 359,790 tons in 2010 (FAOa, 2012).

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<sup>1</sup> The United Nations (UN) defines youth as people between the ages 15-24 years while the African Union (AU) defines youth people between the ages 15-35 years.

<sup>2</sup> Decent work has 4 pillars: 1. Employment creation and enterprise development, 2. Social protection, 3. Standards and rights at work and 4. Governance and social dialogue

<sup>3</sup> A demographic dividend is defined as falling birth rates leading to a smaller population at dependent ages and relatively more people in adult age groups – who comprise the productive labour force.

<sup>4</sup> FAO defines aquaculture as the farming of aquatic organisms: fish, molluscs, crustaceans, aquatic plants, crocodiles, alligators, turtles, and amphibians. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, and protection from predators.

<sup>5</sup> Excluding aquatic plants and non-food products (pearls and shells).

7. However, many countries still lack basic aquaculture infrastructure (among others adequate hatcheries and feed mills for the production of good quality seed and feed) which are pre-requisites for aquaculture development. Some sources estimate that at least USD 200-500 million will need to be invested annually over 15 years if aquaculture is to achieve its expectations. With this kind of investment regional aquaculture production could reach 3 million tons, providing employment to at least 5 million people, and having annual export potential of US\$ 50–100 million (Muir, Gitonga, et al 2005).

## II.2. Employment Prospects in Aquaculture

8. Aquaculture provided 244,435 direct<sup>6</sup> and 342,209 indirect<sup>7</sup> jobs in 2005 in SSA (FAOg 2010). In terms of income, on average each hectare of commercial shrimp farm in Madagascar generated USD 33,000 in value added, USD 827 in labour incomes and 0.64 jobs. One hectare of polyculture (tilapia and catfish) in Nigeria is estimated to generate USD 15,421 in value added and USD 3,812 in labour incomes (Hishamunda, Junning, Cai & PingSun Leung 2009).
9. In terms of employment most of the jobs are likely to be created at the production end of the spectrum. Egyptian estimates shows that for every 100 tons of fish produced 14 full-time jobs will be created. Almost 60% of the jobs are on-farm and the rest are spread across the value chain (Macfadyen, Kenawy et al, 2011).
10. Aquaculture technologies are relatively “gender and age neutral”. However, youth (in particular young women) face constraints in accessing productive resources leading to gender and age related divisions of labour. Young men often work as casual labourers during pond construction and harvesting. Only 16% of farms estimated to be owned and/or managed by women. However, women play an important role in post-harvest activities, marketing and sales (Hecht, 2005). Youth make up a significant number of employees in industrial farms and processing factories. In Mozambique and Zimbabwe 77-83% of employees in the 5 largest aquaculture producers were between 20-39 years (Menezes, 2009). In Lake Harvest, the largest aquaculture producer in SSA, 42% of the labour force is comprised of women (AfDB, 2011).
11. Jobs on the production side offer the greatest opportunities. Thus, it is important that young people access employment opportunities either as owners or as full-time farm workers, managers and technicians at small and medium as well as larger fish farms. As production increases, so will opportunities for non-farm job creation with value addition, packaging, marketing and distribution of aquaculture products.

## II. 3. Key Challenges for Youth in engaging in Commercial<sup>8</sup> Aquaculture

12. The widespread non-commercial aquaculture practiced in SSA with intermittent and low earnings makes fish farming an unattractive livelihood option for young people. Small

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6 Direct Jobs: Number of direct full time on-farm jobs

7 Indirect jobs are those associated with ancillary activities such as building of infrastructure (ponds, cages, tanks, etc.), feed and seed production, manufacturing of fish processing equipment, packaging, marketing and distribution (FAO Aquaculture Newsletter No 45)

8 Commercial Aquaculture is defined as a business (aqua-businesses) that makes a profit. This can be micro, small and medium or large scale. (Triggers and Drivers for establishing profitable Aquaculture sub-sector: FAO 2013).

non-commercial actors account for 80-90% of individuals engaged in aquaculture, but contribute to less than 20% of national production (Moehl, 2013). Very often, youth engagement is restricted to tasks such as pond construction, maintenance and harvesting. Youth engagement as owner-operators of farms is a challenge given their barriers to entry.

13. The “Big 5” challenges facing the aquaculture sector (high quality and affordable seed, feed, capital, markets and information) (Moehl, 2013) are magnified for youth who have limited access to productive resources. These “Big 5” can be extended to include land – one of the main challenges for youth, particularly for young women. On average only 15% of women in SSA are agricultural land holders (FAO, 2011). One mechanism to mitigate the situation could be through wide use of aqua parks<sup>9</sup> focusing on young men and women. Aqua parks have the potential to address key constraints of access to land/water, networking and economies of scale of input supply and market. Uganda has formulated a National Investment Policy for Aquaculture Parks and explicitly identifies youth and women as key operators of the parks<sup>10</sup>. Another option could be cage culture/cage aqua-parks. Although cage culture is more complex than pond systems, requiring specialised inputs and technologies, it is easily scalable and can be suitable for youth. However, for aqua parks to be successful business ventures, the design of the programme should include start-up support, technical and management training as well as strong financial and business planning.
14. Access to finance is another key constraint. Access to the formal financial institutions requires collateral and feasible business plans. Savings and Credit Cooperatives (SACCO's) are widespread across Africa. More often than not youth tend to be absent from decision-making positions within SACCO's (Okwany, 2010). Increasing access to formal credit requires developing the business and financial planning skills of youth. Where access to formal financial mechanisms is difficult, partial subsidies or loans through SME/Youth development and enterprise funds can help. Innovative private sector financing such as Aqua-shops<sup>11</sup> in Kenya (suppliers of feed and seed) can also be explored. The aqua-shops obtain loans from banks and subsequently provide in-kind loans to farmers (feed and seed), which the farmers repay upon harvest. Sufficient competition for the delivery of these services and/or a minimum level of organization amongst fish farmers will ensure adequate farmers' bargaining power.
15. Access to training opportunities is a challenge, particularly for individuals who have no previous experience in fish farming. One alternative is the Farmer Field School approaches (FFS) or the Junior Farmer Field and Life School approach (JFFLS); proven to work well in terrestrial crops with indications that similar successes can be replicated in aquaculture. Ideally, these should be linked to existing national extension systems and frameworks. The JFFLS and increasingly the FFS approach integrates technical, entrepreneurial and life skills trainings. In addition, apprenticeships and mentorship opportunities with successful commercial farmers/entrepreneurs can enhance the business acumen of youth. These approaches, along with the use of social media and online platforms (networking and knowledge) and applications for real-time market and price

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<sup>9</sup> Sites with suitable bio-chemical and socio-economic parameters for developing aqua-businesses. Areas officially designated as parks can be aquatic [in lakes or rivers for cage or pen farming] or terrestrial. The aqua-park approach has been adopted by several countries.

<sup>10</sup> [http://dspace.cigilibrary.org/jspui/bitstream/123456789/34056/1/tapolicybrief47\\_mugabira%5B1%5D.pdf?1](http://dspace.cigilibrary.org/jspui/bitstream/123456789/34056/1/tapolicybrief47_mugabira%5B1%5D.pdf?1)

<sup>11</sup> <http://www.farmafrica.org/kenya/aqua-shops>

- information transmission can facilitate youth access to information and networking opportunities.
16. Lack of reliable statistics is another key constraint (SARNISSA, 2010). Aquaculture statistics in most countries are limited to production data. Socio-economic information is rarely collected making it difficult to integrate the concerns of specific groups such as youth. There are some efforts by stakeholders such as the New Partnership for Africa's Development (NEPAD) to have a better understanding of the youth perspective. In March 2013, NEPAD and "Youth for Fish Programme (YFF)" organized an essay competition on "How to fully engage youth in enhancing fisheries and aquaculture in SSA" at the National Conference on Aquaculture and Fisheries in Malawi. However, more systematic efforts are needed to provide these groups with a platform to voice their issues. Few countries have strong aquaculture associations/producer groups that can represent the interests of small-scale producers (SARNISSA, 2010). Representation of youth within aquaculture producer organizations and cooperatives and regional platforms such as SARNISSA (<http://www.sarnissa.org/HomePage>) and Aquaculture Network of Africa (ANAF <http://www.anafaquaculture.org/>) can bring these issues to policy and decision making levels.
  17. Inclusive aquaculture development requires a dual strategy of attracting large-scale industrial farms and the development of a vibrant small and medium enterprise (SME) sector. Larger industrial producers have better access to finance, facilitate transfer of technologies, lead to rapid production increases and with appropriate planning can help "pull down" services and inputs for the smaller producers. SME's meanwhile being labour intensive (2-3 fold employment) (OECD 2010), can also be efficient producers if they have good support services and market linkages. The development aquaculture in Egypt – currently the 8<sup>th</sup> largest aquaculture producer in the world (in 1970's it only produced 0.2% of the global production) was led by the SME sector. In Kafr El-Sheikh, the governorate where fish farming is most developed revealed that 60% of the farmed area consists of farms between the size of 2-10 ha range and only 4.4% of farmers have ponds larger than 23 ha (Van de Heijden, 2012).
  18. FAO has a long history of supporting the aquaculture sector in SSA. Early efforts indicated strong commonalities between national aquaculture programmes in the Region. Accordingly, the current focus is evolving towards concerted efforts addressing central issues, including the "Big 5". In 2008, FAO's Fisheries and Aquaculture Department introduced the Special Programme for Aquaculture Development in Africa (SPADA) as the unified approach to aquaculture development for SSA. This is a joint collaboration between FAO, New Partnership for Africa's Development (NEPAD) and the AU. SPADA has a target of increasing the aquaculture production in the region by 200% in ten years.
  19. Through SPADA, FAOs activities have focused on policy and production issues. Over the past years, FAO has supported the development of National Aquaculture Strategies (NAS) in a number of countries (e.g., Angola, Democratic Republic of Congo, Cameroon, Ghana, Cape Verde, Ghana, the Gambia, Nigeria, Senegal, Gabon, Kenya, Madagascar, Tanzania, and Zambia). FAO also supported the establishment of the Aquaculture Network of Africa (ANAF) in 2006 which links a dozen countries across the Region. In 2010-2013, FAO and NPCA<sup>12</sup>, through the NEPAD- FAO Fish Programme (NFFP), assisted many countries in the development of market-oriented aquaculture including a "model" clusters/groups in

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<sup>12</sup> NEPAD Planning and Coordinating Agency.

Western Kenya, Nigeria and Zambia. They also held national and regional training on conducting aquaculture as a business. Results indicated significant potential and interest for scaling these activities up in other countries.

20. Through its future interventions, FAO, in collaboration with other relevant institutions such as NPCA and AU-IBAR<sup>13</sup>, can play a key role in integrating a youth focus in aquaculture. One of the aims of SPADA is to assist at least two-thirds of SSA countries to build on their national aquaculture strategies with accompanying plans, legislation and regulations. Making youth an explicit target group within these policies and planning documents will be the first step. FAO is also developing an aquaculture module for the Junior Farmer Field and Life Schools<sup>14</sup> (JFFLS) to be piloted and adapted in SSA during 2014-2015. Furthermore, FAO is developing practical tools to assist SME's to make practical decisions to invest in aquaculture and to manage aquaculture operations as profitable businesses. SPADA in conjunction with ANAF also envisions the establishment of regional/sub-regional trainings institutions to address the capacity gap to develop specialized professionals such as farm managers and technicians.

### III. Youth and Development of Livestock Sector

#### III.1. Livestock Sector in Africa

21. Livestock keeping has been a central element of most rural African economies for centuries. Globally, around one billion people are estimated to depend on livestock (Neely et al. 2009). However, the depth of poverty among livestock keepers is particularly high. It is estimated that 85% of livestock keepers in SSA live in extreme poverty (< \$1 a day) (FAO 2012c).
22. Livestock serves various functions. Most importantly, it provides cash and in kind income through the sale and consumption of animal products. Livestock also offers a form of savings and insurance in times of crisis: growing herds increase capital and the sale of animals provides immediate cash to deal with unexpected expenditures. It is also a common form of capital and facilitates access to financial services as collateral for credit (FAO 2009). Further important roles of livestock include input for crop production (traction power, manure), transport, as well as for important cultural functions.
23. The majority of African small-scale farmers typically are engaged in mixed crop-livestock farming systems for income diversification (FAO, 2009). About 50 million herders and 200 million agro-pastoralists live in Africa's arid and semi-arid zones, owning about a third of the continent's livestock population. Many young people work along livestock value chains, often as unremunerated family workers in harsh working conditions and with low productivity levels. The creation of more gainful and productive youth employment in the livestock sector is a main avenue to reduce rural poverty. For this, one important goal will be to improve the market-orientation and commercialization of livestock activities, also with a view to sustainable intensification and resulting increases in productivity.

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<sup>13</sup> African Union / Interafrican Bureau for Animal Resources

<sup>14</sup> <http://www.fao-ilo.org/?id=20904>

### III.2. Employment prospects in Livestock

24. Livestock's contribution to agricultural GDP is estimated to be around 27% in SSA – a region where agriculture contributes between 60%-80% of total employment. Given the importance of livestock, and the labour-intensive nature of many livestock value chain activities, a considerable share of this employment is related to livestock. Between 1990 and 2007, annual growth rates of livestock sub-sector in SSA stood at 2.4%, compared to an impressive 5.6% in the East Asia Pacific region (FAO 2012b). Growing populations, rapid urbanization, rising per capita incomes and shifting consumption patterns in Africa lead to considerable increases in the demand for animal source foods and potential for growth of the sector (see table below).

*Table 2 - Estimated increase in demand for animal source food (ASF) from 2000 to 2030 in SSA (as percentage of 2000 consumption)*

ASF	Beef	Milk	Mutton	Pork	Poultry	Eggs
Increase	113%	107%	137%	155%	170%	155%

Source: FAO, 2011e, table 4

25. Globally, the World Bank estimates 22% of rural incomes are generated on the basis of livestock-related activities (World Bank 2013). According to the FAO Rural Income Generating Activities (RIGA) database at least 50% of households in every country keep livestock, in some cases close to 90%.

*Table 3 – Rural livestock keepings and its estimated contribution to income*

Livestock and households	Malawi	Madagascar	Ghana	Nigeria
Rural households keeping livestock (%)	62.8%	76.7%	50.1%	46.4%
Livestock contribution to income (%) in livestock-keeping households	14.4%	17.0%	8.6%	11.5%

Source: RIGA database, see <http://www.fao.org/economic/riga/en/>

26. However, there is no clear pattern; levels of household income derived from different livestock value chains vary considerably. This is especially true for the rural poor who typically have fewer abilities to acquire livestock in the first place due to constraints in capital and maintenance costs of different livestock species, these costs particularly high for large ruminants (Pica-Ciamarra et al. 2011).

27. The production of animal source food is structured along value chains that can be very complex, from feed and animal production to processing and marketing. Along these, youth employment opportunities arise in terms of self-employment and wage employment, however, inclusive value chain approaches are needed to realise this potential. The growing demand for livestock products will result in increases of wage employment opportunities along the value chain (IFAD 2010) - highlighting the importance to also incorporate larger-scale commercial producers in policy planning. For example, in Kenya's dairy sector, it is estimated that at the farm level, for every 1000 liters of milk produced, 77 direct farm jobs are generated (FAO 2011f). Many of these jobs are filled by young women and men, initiatives like the East Africa Dairy



Development (EADD) project have successfully increased youth employment in the sector<sup>15</sup>.

### III.3. Key Challenges for Youth in Livestock

28. Africa's livestock sector offers significant employment potential for young men and women to engage in productive and gainful on- and off-farm activities, across the value chain, including transport, feed provision/fattening, veterinary services, processing, trading and retail. However, many rural jobs are characterized by low pay, low productivity, underemployment due to the sector's seasonal character, dangerous work and no social protection. These decent work deficits are typically caused by broader constraints affecting rural communities, including poor infrastructure, inadequate market information, lacking market access and low bargaining power, lack of access to basic financial services, as well as weak institutions (IFAD 2011). Especially for young rural women and men, due to their economic vulnerability and lack of assets, these challenges are difficult to overcome.
29. Access to productive resources is particularly important for youth if they are to engage in livestock production. Young women and men need access to land, technologies, credit facilities, technical know-how, training in business and entrepreneurship, support for microenterprise development, apprenticeships, voluntary work experience and appropriate career advice as well as other follow up services (IFAD 2011). This highlights the need to adopt youth and gender sensitive livestock policies and programmes by rural institutions, organisations (producers' organisations and cooperatives) and SME's. .
30. To raise the productivity of small-scale livestock, improved animal feeding and husbandry, appropriate genetics and animal health are crucial components. For the youth, however, investing in animals and/or commercial animal feed is most often beyond their means and dedicated distribution channels or subsidy schemes for rural youth rarely exist. This highlights an important area for intervention, to strengthen financial mechanisms that support market-oriented livestock-related activities of rural young women and men, allowing them to successfully enter employment along livestock value chains.
31. Imperfect and weak public institutions, including extension services and animal health services, are among the many constraints faced by poor livestock keepers. Commercial animal health services on the other hand are typically not affordable for small-scale livestock producers, including youth (FAO 2011d).
32. Access to communal grazing land – crucial for many livestock keepers – is increasingly limited due to growing trends of privatization and expansion of crop production. In many rural African contexts rural women are excluded from land inheritance, either by law or due to traditions and customs (IFAD 2010). By contrast, research suggests that livestock is often much more equally distributed than land and consequently, poor young women and men have greater chances to profit from owning a few animals despite lacking access to land (FAO 2012b). In this regard, in particular short cycle animal production, including small ruminants and poultry, can create important incomes with little capital and land requirements.

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<sup>15</sup> For more information on EADD, see <http://www.heifer.org/eadd/>.

33. A particular obstacle for many young women and men to enter rural labour markets relates to education and training. Education and skills development, particularly formal and informal vocational education and training are crucial for harnessing the potential of the livestock sub-sector. Enabling youth to actively participate in livestock value chains is about providing them with adequate technical skills as well as the necessary business and organizational capacities.
34. Reliable data on rural labour markets is scarce and there is a shortage of project-level data on rural youth as a distinct category. As a consequence, very little is known about the motivations, aspirations, and constraints of young women and men. Networks and organisations, including producers' organisations, rarely include young women and men engaged in the livestock sector. Decision and policy making processes often fail to integrate youth and their concerns. This calls for the need to strengthen youth participation and leadership in producers' organizations as well as create and strengthen dialogue of policy makers, donors, producers, and civil society with youths and youth organisations, in order to empower them to participate in decision-making processes.
35. The above highlights the great need for an integrated approach<sup>16</sup> in order to create a livestock sector that provides attractive income generating activities for youth. Successfully addressing their needs depends on the coordinated support by policy-makers and donors.
36. Yet, there is a pronounced lack of support towards fostering youth employment in the livestock sub-sector. Very few, if any, policies, projects or programmes exist that specifically address the issue of (youth) employment in the livestock sector.<sup>17</sup> Some individual project components address the topic, but fully dedicated programmes/projects are elusive. For instance, the Swaziland Agricultural Development Project implemented by FAO included a specific component to create gainful employment for young people, by supporting 50 youth groups with financial and technical assistance to set up profitable poultry projects<sup>18</sup>. Similar, but smaller FAO initiatives were also successfully implemented in Niger and Burkina Faso. In another example, the African Development Bank (AfDB) Livestock Infrastructure Support Project in Zambia had a component specifically targeting activities along livestock value chains in order to improve young women and men's ability to enter employment (AfDB 2013).
37. However, these positive examples are rare. Limited focus on the issue of youth employment in the livestock sometimes translated to an insufficient reflection of the topic within national policy agendas across the African continent. Resulting piecemeal interventions and fragmentation, incomplete targeting, as well as limited resources have at times limited the effectiveness of national policy-making and implementation

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<sup>16</sup> This integrated approach will need to account for differences across production systems as well as geographical and socio-economic contexts. .

<sup>17</sup> A rapid appraisal of relevant project databases and web portals (inter alia incl. FAO FPMIS, World Bank project database, AfDB Project Portfolio, IFAD Rural Poverty Portal, IFPRI project portfolio), as well as an informal inquiry among senior livestock development and rural employment experts at FAO (AGA, ESP, NRD, OED, as well as Regional and Subregional Offices), IFAD, and ILRI has not yielded any coherent projects that specifically address the topic.

<sup>18</sup> For more information on SADP and its successful youth component, see FAO (2011d) as well as <http://www.youtube.com/watch?v=DplHtQQ6MYs>.

38. Well-informed policy decisions require timely and robust evidence. However, there is limited evidence on youth employment in livestock. Available literature mainly deals with livelihoods and livestock, but it does not explicitly address employment of youth (FAO 2007; ILRI 2008; LDIA 2012; Covarrubias et al. 2012)<sup>19</sup>. Other reports looking at the youth employment challenge in Africa leave out the livestock sub-sector entirely (Brooks et al., 2013). The importance of livestock for employment can be inferred from most of this literature, but it is rarely explicitly addressed (Mensah-Abrampa et al. 2012; Bezu & Holden 2013; IEG 2013; ILO 2012b).
39. Using a value chain approach is instrumental for the “identification of youth engagement possibilities” (Mensah-Abrampa et al., 2012, p. 45). It is essential to look beyond the level of mere primary production and consider youth employment opportunities along the whole value chain, including transport, processing, and feed provision/fattening, veterinary services and retail, both in terms of self-employment and wage employment.
40. The issue of youth employment in Africa’s livestock sub-sector remains largely unaddressed by politicians and development practitioners alike. This is a disconcerting realisation, for both the economic concerns of the ‘livestock sector’ and of ‘youth employment’ are too important for the development of rural African economies, for their intersection (‘youth employment in the livestock sector’) to be ignored and left vacant.

#### IV. Key messages

41. There are several common areas of intervention for both sub-sectors to facilitate young people’s involvement. The main messages are:
- a. **A profitable and business-oriented aquaculture and livestock sector** can generate employment opportunities for young women and men across the value chain.
  - b. **Governments must create an enabling environment for private sector investment and foster linkages between small and large actors.** This will generate entrepreneurial opportunities for youth either as small-medium scale producers, as out growers to larger firms, as service providers across the value chain (input provision, value addition and marketing) or as formal wage employees.
  - c. **Engaging youth in policy dialogue requires their participation and leadership in producers’ organization and other mechanisms/institutions of collective action.** This will enable the inclusion of youth concerns into sector development policies, strategies and programmes.
  - d. **Policies and interventions aimed at attracting youth will have to address key barriers to entry such as access to finance, land and other productive resources.** Some of the sector-specific strategies that can be explored are aqua-

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<sup>19</sup> For example, an important CGIAR research project entitled ‘More meat, milk and fish – by and for the poor’ analyses the potential for productivity enhancements along livestock value chains. Accordingly, it makes reference to the importance of employment opportunities, especially for women and young people, in livestock particularly through improved feeding systems.

See <http://cgspace.cgiar.org/handle/10568/3248>.

parks (land and lake-based) for aquaculture, and production of short cycle animals, such as poultry and small ruminants for livestock.

- e. **Invest in the technical, entrepreneurial and management skills and capacity of youth.** Proven capacity building methodologies, such as Farmer Field Schools (FFS) and Junior Farmer Field and Life Schools (JFFLS) can be used for both sub-sectors. In addition, apprenticeships and mentorship opportunities with commercial farmers/entrepreneurs can enhance the business acumen of youth.
- f. **Facilitate information and knowledge sharing and networking through innovative use of ICT.** The use of social media and online platforms (networking and knowledge) and applications for real-time market and price information transmission can facilitate youth access to information and networking opportunities.

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