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Developing a community-based rangeland health system in Ethiopia

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Abstract

Rangelands are the cornerstone of African pastoral production systems and rangeland health (RLH) is vital for the health of livestock and the people who depend on them. RLH is integrally linked to actions of livestock, humans, climate and management applied. Cognisant of this, the HEAL (One Health for Humans, Environment, Animals and Livelihoods) project has been demonstrating how RLH can be integrated into One Health interventions at a local level in pastoral areas of Ethiopia, Kenya and Somalia. HEAL, a 12-year project started in 2019 with funding from Swiss Development Cooperation, reshapes service delivery into One Health Units (OHUs), which provides a sustainable, demand-driven and cost-effective integrated human, animal and RLH services. Key actors in implementation of OHUs are community-based health workers. In Ethiopia, these include the well-established systems of community-animal health workers (CAHWs) for livestock and health extension workers (HEWs) for humans, but there is no equivalent system for rangeland. In response to this, HEAL is developing a community-based rangeland health workers (CRHWs) system. A central pillar of this is piloting CRHWs, following a review of current practice, lessons learned from CAHWs and HEWs, and consultations with experts and communities. Initially, CRHWs are providing information and raising awareness on invasive species and establishing community RLH monitoring system for these. To instil opportunities for CRHWs to be self-supporting, nurseries for growing and selling grass and tree seedlings were established in agreement with community leaders. This paper shares experiences of piloting CRHWs and how this contributes to broader development and investment in RLH. Collaborative design from the beginning was important for increasing likelihood of uptake by government and communities besides considering sustainability and financing. Research played important role in assessing opportunity and application of CRHWs, developing support training materials and for sharing lessons learned.

Introduction

Rangelands are cornerstone of African pastoral production systems (ILRI et al. 2021). Thus, rangeland health (RLH) is vital for livestock and human health and is integrally linked to actions of livestock, humans, climate and management applied (e.., sustainable grazing; build soil organic matter). Nevertheless, East African rangelands face many problems like climatic fluctuations, drought and others. Ethiopia also has critical shortage of qualified rangeland experts with a high staff turnover (EIAR, 2017). One Health (OH) has also received increasing attention in recent years as an integrated approach bringing together human, animal and

ecosystem-environmental health (Cunningham et al. 2017). The HEAL (One Health for Humans, Environment, Animals and Livelihoods) has been demonstrating how environment/rangeland health can and should be integrated into One Health (OH) interventions at local level in pastoral areas of Ethiopia, Kenya and Somalia. The HEAL was established in 2019, with funding from Swiss Development Cooperation and is a 12-year project that seeks to establish sustainable, demand-driven and needs-based One Health Units (OHUs), as cost-effective, innovative, integrated service delivery models. Key actors in the implementation of the OHUs are community-based health workers, which provides cost-effective and integrated human, animal and rangeland health services to local communities. In Ethiopia, there is a well-established system of CAHWs for the livestock health and a strong and well-functioning system of HEWs for human health at community level. However, there is no equivalent structure for rangeland health. A study was undertaken to assess possibility of establishing a system of CRHWs and its operational modality in Ethiopia.

Methods

The study was carried out in HEAL project areas of Somali and Oromia Regional States of Ethiopia (Liben, Dawa and Borana zones). The study comprised rapid assessment; validation of assessment findings through participatory workshops; training and follow up of CRHWs for implementation. The rapid assessment included literature review with focus on HEP/HEWs, CAHWs and CRHWs which was followed by key informants interviews (KIIs) using checklists with qualified, and knowledgeable individuals in livestock, humans and RLH. The KIIs were undertaken with community elders, heads/experts of Tuft University and Vétérinaires Sans Frontières (VSF), researchers/ national rangeland coordinator, livestock /pastoral extension heads at different levels, HEAL field coordinators and Amref Health Africa staff. A total of 28 KII interviews were conducted. Two workshops were undertaken to validate assessment findings, agree on next step including selection of CRHWs, income sources of CRHWs etc. Preparation of training materials and selection of CRHWs in each kebele (lowest administrative unit) was undertaken. CRHWs were trained on overview and experiences of OHU; management of invasive species and rangelands; community awareness and monitoring; nursery management; practical visits. Follow up of piloting CRHWs system was undertaken by HEAL Project staff and partners.

Results

Assessment report on possibility of establishing CRHWs system was organized covering different topics.

Health Extension Program (HEP)/HEWs: The Ethiopian government established a 20-years Health Sector Development Programme in 1997. After implementing the first five-years plan, health sector performance improved but the ability to deliver essential services in rural settings was less successful (EFMOH 2008). The government introduced HEP, a primary care delivery strategy, to address the challenges and achieve WHO MDGs. HEP was launched at scale in 2003 with 17 health extension packages for rural regions, which were later adapted for towns and pastoral areas. The program focused on promotional and preventive measures based on training and awareness creation. Sustainability required institutionalized and integrated health program with developed human capacity, infrastructure, decentralized management and political commitment. HEWs are selected in a participatory way from community members using selection criteria and are given training for 1 year. Model families and non-paid community health voluntaries support HEWS. The system is recognized globally (Bowser *et al*., 2023).

CAHWs: Establishing and maintaining nationwide animal disease surveillance systems is a major challenge in many developing countries due to various reasons. Use of CAHWs selected in participatory way from community using selection criteria was found as the best option for preventive and primary curative purposes. It has demonstrated remarkable achievements. Its sustainability depends on: income generated from their livestock health services, connections with local drug suppliers, level of training and supervision by veterinary statutory bodies, institutional arrangements for legalization and promotion of the services delivered and entrepreneurial skills (OIE 2013).

Key lessons learnt from HEWs and CAHWs: the long journey with many ups and downs; the need to start with the HEAL project; sustainability; good preparations, engaging community and relevant actors from beginning for buy-in of the concept; use of multidisciplinary approaches; community access to services in times of need; awareness creation etc.

Organization of CRHWs system: The response of the KII indicated that CRHWs system needs to be established in Ethiopian rangelands as we have limited experienced professions in rangeland management resulting in the lack of adequate service delivery particularly at the community level. The rangelands are degrading rapidly, requiring faster action. As CAHWs (livestock) and HEWs (humans) are already collaborating in the OHUs, supporting them by including CRHWs is essential. It is suggested for CRHWs to undertake simple tasks within the preventive and promotional general umbrella: **rangeland health education and communication** (e.g., awareness raising, community mobilization, sharing information on invasive species/rangeland status); **Rangeland evaluation and monitoring c) rangeland management and rehabilitation** (e.g., involve in degraded area identification, suggest interventions with community and inform responsible body timely). The aim of the CRHW system is not to replace NRM services but to complement them. Their role in OHU will include: support HEAL project officers in planning, site selection, implementing, training, awareness creation etc. The respondents and review work indicated that CRHWs selection criteria can vary among different Regions of Ethiopia. However, the important are: a) be a kebele resident and know the area well, b) 25 years of age or older and own livestock, c) have basic reading and writing skills, d) have time, willing and committed to work and serve community, e) pro-development, f) trustworthy and respected by different actors, g) have good relationships with people at different levels, h) willing to learn and take action, i) have some training related to rangelands and NRM. They should be selected in a participatory way from the community based on selection criteria.

Institutionalizing CRHWs: The significance of institutionalization of CRHWs system was indicated in the study results. The participants suggested three options for making the CRHW system sustainable. First, there is no need to establish a separate structure. Instead, they can be under the kebele natural resource management administration office, or the livestock production and marketing office (embedded in the existing system). The second option is formal institutionalization by having a focal person from the agricultural or pastoral development office at the region, zone and district levels for follow-up, supervision and other issues. These government officers should help with training and regular follow-up. The third option is for CRHWs to operate within a local rangeland management institution, which must be adapted to each context, considering specific sociocultural, political, economic and environmental factors. Therefore, one-size-fits- all model does not work. Potential sources of income for CRHWs include: i) advising, guiding and getting involved in bush control ii) collecting forest products iii) seedling production or collecting seeds of native plants for rangeland improvement, iv) participating in rangeland monitoring and reporting, v) training other community members, vii) getting involved in apiculture, viii) playing role in identifying rangeland plants of medicinal and other economic value. Among these, the HEAL project focused on supporting nursery establishment in consultation with the administration and CRHWs. Budget is needed for different purposes (e.g,, training materials preparation, training, equipment), Sustaining factors of the CRHWs include i) individual and community commitment, ii) sources of income, iii) legal status, iv) supervision, v) equipment, vi) political commitment, vii) public-private partnership.

Opportunities (e.g., rehabilitating degraded rangelands to create favourable situation for livestock production including better control of invasive and noxious plants, livestock feed resources, increasing rangeland production and productivity) and challenges (e.g., ownership, resource limitations. ensuring regular monitoring, accountability and coordination, increased rangeland privatization) of the CRHWs system and its implementation were also explored and documented through the KII and literature review. Working at the community level, the HEAL project can operationalize/pilot the system by discussing with local bodies at kebele rangeland unit and district levels. Piloting may not require specific legislation and policy**.** However**,** there will be a need to discuss policy issues with concerned officials once the CRHW system will be ready to scale. Also piloting and evidence generation, there will be a need to develop national minimum standards and

guidelines for designing the system which include understanding the context; community dialogue and selection, training CRHWs, monitoring and refresher training and development of national training curriculum.

Validating findings, selecting CRHWs and training: 27 people attended the participatory workshops in Moyale and Filtu which validated the findings of the assessment report, included additional selection criteria and income source, and agreed on the way forward. Twelve CRHWs (6 from Borana and 6 from Dawa and Liben zones) were selected and trained for six days. The implementation of CRHWs system is handled by HEAL project staff and partners at different levels.

Discussion

The study showed that there are no community-based rangeland health workers in Ethiopia. The positive response of all key informants on the CRHWs system, lessons drawn, and information gathered from the HEP/HEWs and CAHW implementation and the review results have paved the way to pilot CRHWs system. The HEAL project has provided the foundation for beginning the pilot phase as it is assessing the value of an integrated service delivery model among pastoralist communities. To date, the rangelands component of the HEAL project has focused on participatory rangeland management and, while this has laid a solid foundation for improved rangeland management in the community, it did not allow to fully integrate rangeland health into the community-based service delivery model proposed through the OHU. Accordingly, piloting a CRHW system could take the rangelands component a step closer to embedding rangelands health at the local level and pave the way for developing private sector rangeland service provision in Ethiopia. It is also worth looking into the possibility of linking with existing initiatives like the pastoral safety net program. The CRHWs could help rationalize the program and other resources at the community level by targeting these resources where restoration is feasible and offers tangible benefits to pastoralists.

The progress made so far have shown that it is possible to develop a system of CRHWs. The project is maintaining a comprehensive documentation during the pilot period which will lay the foundation for scaling up. The short-term plan should start with what is in hand and develop mid- and long-term plans so that the CRHWs stand on their own. Collaborative efforts among different actors is highly needed. Institutionalizing the system, supporting the CRHWs system to stand on its own (sustainability), equipping the CRHWs so that they generate their own income source are founding blocks for the system's success. It has also to be linked to the broader development of the pastoral and agro-pastoral communities whose livelihood depends on livestock production and utilization of different ecosystem services from the rangelands.

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