

One health – Integrated human and animal health approaches

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Since 1998, the Swiss Tropical Institute partners with research institutes and authorities in Chad, Mauritania, Mali and Kyrgyzstan to improve access to health services of mobile pastoralists. These research partnerships focus on the interactions of pastoralists, their livestock and the environment. Livestock is central to the livelihood of pastoralists, however, may also be responsible transmission of diseases to people and go beyond carrying capacity of pastures. Pastoralists use mobility to access natural resources that are limited in time and space, but mobility may also put barriers to access services such as health and education. The One Health concept linking humans, animals and their environment has good potential for diseases control in marginalized and resource poor settings. The translation of One Health approaches into health strategies and policy requires multiple dialogue processes.

In Chad, following simultaneous assessment of the health of pastoralists and their livestock which showed that children have not been vaccinated, whereas livestock was, joint vaccination campaigns for people and livestock were implemented with existing infrastructure and personnel of the Expanded Programme on Immunization (EPI) and veterinary services. The campaigns were evaluated for their feasibility and costs. Communities and service providers highly appreciated the campaigns and the public health sector saved 15% of its operational costs. Participatory stakeholder seminars to define priorities of the populations and the authorities to bridge the applicability gap in the health system contributed to draft a national programme on primary social services for mobile pastoralists. Twelve ministries were involved in the process and the initiative received more attention from all stakeholders because of the North-South transparent partnerships.

In Mongolia, economic considerations of control of brucellosis showed that the feasible and most efficient control measure is mass vaccination in livestock. In Kyrgyzstan, the epidemiological links were established with a simultaneous assessment of brucellosis seroprevalences in livestock holders and their animals, which allowed the identification of possible sources of exposure of livestock holders and better insights into transmission pathways, which, in turn, is needed to plan control measures and provided the needed evidence for public health and veterinary authorities to start cooperating.

The implementation of the One Health is usually hindered by the rigid health curricula and the sectoral health strategies and policy. In such context, realistic control options and evidence for decision-making still are to be generated by researchers. The One Health concept offers a consultative mechanism for defining health and education priorities. By enhancing intersectoral communication, surveillance and inter-ministerial planning, mixed field research and action teams are potential nucleus for health intervention. A prerequisite for success on zoonoses diagnostic and control capacities are (i) integrative thinking from all stakeholders and (ii) capacity-building and technology transfer.

Network opportunities exist in the challenging health system. New partnerships and alliances with more South-South collaborations for sustainable approaches exist within the NCCR North-South. Within the Wellcome Trust initiative on African institutional capacity building, the “African Research Consortium for ecosystem and population health: expanding frontiers in health” offer conditions to promote the One Health concept in the academia and policy levels.

The main lessons learnt were

Research at the interface between humans and veterinary medicine suggests new avenues to low-cost methods of combating disease. The costs of control can be shared between the sectors according to their benefit

Research that includes interest groups in the decision-making process has the potential to improve health services in resource-poor areas. And it can aid in mediating between the people and the authorities.

North-South partnerships must be transparent. They train academic and technical personnel and help to make better use of existing infrastructure. In this way, they strengthen research in Africa.