

Communication for the development of pastoralism

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Summary

Communication is vital for the socio-economic and cultural development of pastoralists. If used constructively, communication can help to create a favourable environment for change and modernisation. This paper tries to uncover trends in communication as part of pastoral development, emphasising both indigenous and current methods of communication and prevailing constraints. This study reveals that pastoral development interventions in the past have often failed to achieve their goals, due to the centralised, 'top-down' approaches adopted and to reliance on external strategies and channels which ignored the indigenous knowledge and communications systems of pastoralists. Pastoralists have their own well-established communications systems for sharing information on climatic conditions and ecology, as well as economic, social and political issues. Modern communication technologies, especially radio and mobile telephones, are increasingly being used by pastoralists to access current regional information. However, pastoral development in the communications area is currently constrained by the failure of various development agencies and stakeholders to use participatory approaches, and by poor infrastructure and weak capacity. The authors therefore call for the adoption of more participatory and integrated approaches towards communication, the expansion of infrastructure and building of capacity.

Keywords

Africa – Communication – Development – Ethiopia – Indigenous communication – Modern communication – Pastoralism.

Introduction

In the past, pastoral development priorities have usually been dictated by external agents, who equate pastoral development with livestock development (1, 2). Drylands are characterised by high variability and require a dynamic and flexible management system. However, blueprint development policies, programmes and strategies, drawn from less variable environments, were widely implemented (1, 3, 4, 5). Pastoralists were relegated to passive recipients of technology transfers; the vital role played by their traditional institutions and knowledge systems was usually

ignored (1, 2). As a result, these interventions failed to curb rangeland degradation and increase livestock productivity (1, 6).

Pastoralists face increasing challenges from demographic pressures, rangeland degradation and alienation, recurrent drought and poor infrastructure, as well as livestock feed, health and marketing problems (1). Despite these challenges, pastoralism remains suited to the vagaries of the dryland environment and its sustainable use (7). The gap between the development priorities set by pastoralists and those set by governments can only be bridged by engaging

pastoralists in the decision-making process (1, 7, 8). The two key pillars of sustainable development – participation and empowerment – can only be achieved through effective and comprehensive communication (9).

Communication and access to information and knowledge are vital for the socio-economic development of pastoralists (10). Pastoralists have well-established traditional communication systems used to share experiences on climate, ecology and local security as well as other issues of economic, social and political importance (5, 11). Modern communication technologies, especially mobile telephones, have made significant inroads into these traditions and contributed to the social, economic and political transformation of the pastoralist way of life (1, 12).

While traditional media are often stigmatised as obsolete (5), modern mass media provide many obstacles in the form of limited coverage, language barriers and difficulties in access for the rural poor and illiterate (14). Improving the rural communications infrastructure (15) and training pastoralists in modern communication methods will facilitate desirable outcomes (16). In addition, a combined use of indigenous and modern communications systems will improve economic performance and assist in balancing social and cultural elements of the pastoralist way of life (5, 17, 18, 19).

This review analyses the changing role of communications, particularly in regard to pastoral development. It aims to draw lessons from the major determinants of success and envisages scenarios for a better way forward. The authors made use of those relevant reference materials available to them, focusing on experiences in Africa in general, and in Ethiopia in particular. Selected examples of indigenous and modern African pastoral communication practices were also included.

Communication and pastoralism

Role of indigenous communication systems

'Indigenous communication systems' refers to various channels of informal (unstructured), horizontal (person-to-person) social interactions (20), which are deeply enmeshed with the qualities and attributes of a particular society, including its language, history, belief systems, values, knowledge, institutions, customs, conventions, way of life, etc. (21, 22). The core element of traditional communication is language and its three ingredients: thoughts, feelings and words (23). Non-verbal traditional communication, on the other hand, is much more complex than simple speech and has to do with sharing meaning with others through non-linguistic methods (24).

Pastoral communities have effective indigenous communication systems through which they generate, store, share, transmit and use information and knowledge. The primary mode of communication for many pastoral groups is dyadic, i.e. word of mouth as a means of face-to-face communication (5, 20, 25, 26). Most African pastoralist societies possess a rich indigenous language and commonly use folk media such as: storytelling, song, poetry, festivals, village organisations, markets, discussions at the well and tea house, and other forms of communication. The content and purpose of pastoral oral communication are equally varied (17, 25). However, non-verbal traditional communication systems play equally important roles in livestock husbandry and social interactions (27). For example, branding and/or cutting on various parts of the animal are used to designate its breed and pedigree, its ownership (tribal, individual or family property) and/or whether it is convalescing (disease control).

Pastoralists' knowledge of species, ecosystems and climate form the basis for sustainable land management. In many East African pastoral communities, the selection of grazing sites is aided by scouts, who report on the condition of distant pastures, estimating how long the fodder and water will sustain a given number of livestock (28). Pastoralist societies, including the Afar in Ethiopia (29, 30), Somalis in Kenya (11) and many others, consult traditional climate forecasters to plan their grazing strategies. Traditional leaders negotiate rangeland use and migratory systems and coordinate the enforcement of customary conventions (31, 32, 33). Afar pastoralists in Ethiopia have a long-standing tradition of informal oral exchange, called *Dagu* (Box 1). When the Afar meet in any setting, they exchange greetings and sit down to share information on issues related to rainfall, pasture, local security, etc. The information is quickly relayed to different villages, and this method of

Box 1

Dagu and Afar pastoralists

The Afar pastoralists of Ethiopia have a long-standing tradition of effective communication called *Dagu*. When the Afar people meet in the bush or market areas, they greet each other and sit down to exchange information on issues related to rainfall, pasture and local security. The disseminated information quickly spreads to different villages through a relay mechanism (32, 33, 34). This is the central component of natural resource management. Often a group of young people (*Feema*) are entrusted with the responsibility of keeping the rules of natural resource use, formulated by the clan leaders (*Mekabon*). Forest areas and restricted grazing lands are protected and any violation of the rules (such as cutting down trees or animals trespassing into restricted areas) is reported by the leader of the group (*Feema-aba*) to the traditional judge/arbitrator (*Dantu*), who decides on the severity and type of punishment and fines to be imposed on the perpetrators (5, 32).

spreading information is a vital component for a dynamic resource management system (5, 32, 33).

Meanwhile, many pastoralist communities in Africa often transmit their traditional land and resource management systems through oral folklore (28). Agro-pastoralists are crucial for communication between sedentary and mobile communities. Sharing the same ethno-linguistic identity as the pastoralists, they often act as invaluable brokers in negotiating herding tracks and 'camping' of herds on farms, as well as arranging for the rearing of work animals (35).

For many centuries, an indigenous knowledge of the climate, resource management, animal husbandry, health care, etc. was the only source of information for pastoral societies. The body of knowledge varies from community to community but is always being developed through systematic observational and experimental learning, leading to constant evolution (27, 33, 35, 36). Oral communication is a central element in the development, use and transmission of pastoralist indigenous knowledge. For example, pastoralist traditional healers often employ confidential oral lessons, recitals, chanting and demonstrations to transmit their highly valued wisdom to preferred family members (11, 25, 34). In oral cultures, children are taught about their tradition by word of mouth. Oral literatures ensure the survival of tradition in the minds of the young (26). In emergencies, such as drought, clan leaders discuss ways to support the most vulnerable by fairly distributing the burden among the better off (11, 37). Oral channels are important elements of traditional pastoralist conflict resolution systems, such as the *araara* (reconciliation) tradition of the Borana (38) and *Xeer* system of the Somalis (39).

Usually, pastoral herds are given names and trained to recognise their herder's voice so that they collectively respond to his or her orders. This is particularly useful for preventing raids and attacks by wild predators during night grazing. Pastoral societies also practise animal/herd ownership marking by branding specific parts of the body with a hot iron or cutting a small section of the animal's body. Ownership markings among the different pastoral groups may designate breed; tribal, individual or family property; or a convalescing animal. Lost animals can easily be traced by the markings they bear and stealing is made more difficult, as the animal's owner can be readily identified, wherever it is found (27, 36).

Today, these indigenous pastoralist communication systems have been greatly disrupted by communication norms instituted during the post-colonial era (25). Lacking sophistication but certainly not content, oral traditions are being left behind as younger generations look towards the more accepted modern systems to build their future (11). Indigenous communication systems are a vital aspect of culture and should be respected by outsiders (20). Traditional

communication systems offer the appropriate media to carry messages to pastoral communities for the purposes and processes of change and development. The recognition and use of indigenous knowledge and communication systems could lead to the increased participation of pastoralists in development, and in supporting grassroots technical and social interventions and innovations (17, 28, 40). Sustainable improvements in pastoralist livelihoods can be ensured if synergies between the traditional system and modern technological advancements can be maintained. A combination of the two systems provides a better economic performance while, at the same time, keeping social and cultural elements in balance (5).

Modern communication technologies and pastoral livelihoods

Communication is vital for the economic development of pastoral communities. Pastoralists need a comprehensive livestock information system, focusing on livestock prices, volumes, markets, forage conditions, disease incidence, water supplies and conflict hotspots (10).

Despite the weak penetration of modern communication technologies into pastoral areas, improvements in telecommunications have greatly benefited pastoralists (1). Mobile telephones, especially, are contributing to social, economic and political transformations (13, 14). Mobile phones allow pastoralists to receive up-to-date market information on where to sell their livestock, reduce transaction costs and improve access to services, thereby raising their incomes (13, 15). In Senegal, short message service (SMS) technology and mobile geographical information systems (GIS) are used to determine pastoral mobility and water point management (41). In Kenya, pastoralists receive meteorological climate forecasts via radio (30).

Mobile communication has probably had a bigger impact on humankind in a shorter period of time than any other invention in human history. Mobile phones and the wireless Internet end isolation, and will therefore arguably prove to be the most transformative technology of economic development of our time (13). In rural Tanzania, telecentres and mobile telephones provide agro-pastoralists with information on new products, agro-inputs, capacity-building and government services, as well as weather and market information (42). This increases the ability to access livelihood assets, undertake diverse livelihood strategies, and resist vulnerabilities, thereby improving livelihoods and reducing poverty (43). The impacts of the mobile phone on the livelihoods of Nigerian pastoralists include the formation and membership of cooperatives, increases in milk production and income, a reduction in the morbidity and mortality rates of cattle, pasture development and an increase in school enrolment (44).

The combination of mobile phone and radio, along with the Internet, affords a unique opportunity to overcome the challenges of collecting market information in the remote areas inhabited by pastoral communities (17). While modern information and communication technologies such as the Internet are not so easily accessed, mobile phones are widely used in the Afar Region. This has helped pastoralists to exchange views on grazing land resources and their management, market conditions, policy trends and security matters, all of which affect their livelihoods (5).

Demographic information is the basis for planning and managing social services; in particular, health services. However, mobile pastoralists are rarely included in demographic assessments (45). In Chad, demographic surveillance of humans and animals was conducted using mobile phones. The study showed the feasibility of mobile surveillance of mobile pastoralist camps and provided usable information on human and livestock population structures, pregnancy outcomes and herd dynamics, as well as mobility patterns. The method was found to be low cost and well accepted by the target population, and produced consistent and reliable data (46).

Box 2, below, shows the use of an innovative mobile money-transfer technology, known as M-Pesa, developed in Kenya. This technology makes livestock prices more uniform and predictable, thus increasing the profits of pastoralists.

Box 2

M-Pesa in livestock marketing

Carrying cash from livestock markets to the rangelands has been one of the major problems faced by Kenyan pastoralists. In 2007, the leading mobile operator in Kenya, Safaricom, launched one of the most successful implementations of a mobile money transfer service, M-Pesa. ('Pesa' is the Swahili word for money and 'M' represents mobile.) M-Pesa is a short message service- (SMS-) based system that enables users to deposit, send, and withdraw funds using their mobile phone. M-Pesa allows herders to avoid carrying cash, and people without a bank account can transfer funds as quickly and easily as sending a text message. This technology has greatly benefited Maasai livestock enterprises and traders, helping them to cope with one of the worst droughts in Kenya's history. Mobile phones allow herders to exchange information on livestock grazing and watering points. M-Pesa has helped Maasai to transfer money back home or sell their livestock easily. They can also communicate with their contacts at livestock markets while still in the rangelands, and take their cattle to those markets that offer the best price. Moreover, the service has reduced transaction costs for livestock trading. Thus, M-Pesa provided cash transfer security in transit to and from the rangelands and prices became more uniform and predictable, increasing pastoralists' profits (47, 48, 49, 50, 51).

Integrated communication systems

A communication scenario in which indigenous and modern systems operate independently has historically failed to deliver sustainable pastoralist livelihoods and economic progress, particularly in Africa. The current template for sustainable development emphasises a participatory process that builds on local knowledge and resources. Accordingly, there is a growing realisation of the need to integrate traditional and modern communication systems for sustainable pastoralist development (17, 18, 19). According to Chukwu (18), combining technological communication with indigenous interpersonal communication to support development is the centrepiece of the indigenisation framework, in which technological media will be selected for their capacity to fit into indigenous patterns. In line with this, Mundy and Compton (14) propose the following four-way mechanism of exchange between external and indigenous systems (Table I).

There is significant potential for using indigenous channels to carry external information. Folk media (popular theatre, puppet shows, music and dance) have frequently and successfully been adopted to promote issues of relevance to marginal groups. Subjects have included health care, family size, female genital mutilation, teenage pregnancy, human immunodeficiency viral infection and acquired immune deficiency syndrome (HIV/AIDS), literacy programmes, environmental protection and the introduction of agricultural practices (17). Likewise, informal oral traditions, such as *Dagu*, can serve as an effective tool for HIV/AIDS communication in predominantly pastoral communities, such as the Afar in Ethiopia (52).

Local organisations and 'apprenticeships' facilitate the dissemination of new techniques (20). Pastoralist social gatherings, for example, Ethiopian Pastoralists' Day (Box 3), also increase opportunities for wider dialogue on development and social change. Traditional forms of communication can be integrated with other media, such as radio, television, video and audio formats. The participation of local artists, storytellers, performers and musicians in the production and use of traditional media ensures respect for traditional values, symbols and realities and, at the same time, means that such media productions appeal to these communities (17).

Where agricultural research systems are weak, farming systems are complex, and local knowledge is rich, an extension-based approach to indigenous knowledge, by providing more information and training, and developing new institutions, could pay far higher dividends than the more usual 'top-down' methods. One way in which external development agents can make use of indigenous channels is by training and learning from local professionals; adding to instead of replacing the skills of herders, traditional healers and midwives (20, 27). This is the basis for the

Table I
Framework for an integrated communication system

Source: (14)

	Exogenous knowledge	Indigenous knowledge
Exogenous communication	Technology transfer	Indigenous-knowledge-based development
Indigenous communication	Diffusion; co-opting folk media	Cultural continuity and change

Box 3

Ethiopian Pastoralists’ Day

One important communication platform being used in Ethiopia is Ethiopian Pastoralists’ Day (EPD). EPD is an advocacy forum where pastoralists, development partners and policy-makers meet to discuss the development priorities of pastoralists. EPD is aimed at raising awareness among public groups, non-governmental organisations (NGOs) and government institutions of the viability of the pastoral mode of production, at lobbying decision-makers to pass pastoral-friendly policies and at providing a venue for pastoral groups and partners from different regions to share their experiences.

Since the establishment of EPD in 1999 and its annual celebration on 25 January, a number of positive developments favouring pastoralism have emerged in Ethiopia. The major ones are: the recognition of EPD as a national holiday in 2006, the establishment of a Pastoral Standing Committee in the House of Representatives, initiatives in pastoral community development projects, and the establishment of Pastoral Elders’ councils in Oromia, Somali and Afar Regional States.

Box 4

Community Animal Health Workers and disease reporting

Community animal health workers (CAHWs) have more than once reported the first indications of important livestock disease outbreaks. In Ethiopia, a CAHW in the Afar Region made an early report of an emerging epidemic of respiratory disease in camels that subsequently swept East Africa, especially Ethiopia, Somalia and Kenya. In Karamoja, Uganda, in 1994 and eastern equatorial southern Sudan in 1998, CAHWs provided the first news of rinderpest outbreaks. This information was then transmitted to programme veterinarians who were able to visit the areas in question, collect samples and confirm the presence of rinderpest. These unsolicited actions of CAHWs in remote areas played a crucial role in identifying the remaining foci of rinderpest in the final stages of the eradication programme. Source: Mariner *et al.* (55)

development of pastoralist community animal health worker (CAHW) programmes. A range of CAHW projects in a number of different countries have proven successful in delivering primary animal health services (6). Examples include: village animal health workers in Nepal, ‘vet scouts’ in Kenya, nomadic animal health auxiliaries in Somalia and, more recently, CAHWs in East Africa (53, 54).

The key actors in the field are local representatives, or perhaps traditional healers, trained as CAHWs. These basic service providers act as communication links between Veterinary Services and livestock owners (27, 53, 55). They are also well placed to act as the ‘eyes and ears’ of conventional surveillance systems and can greatly enhance the sensitivity and representativeness of the limited capacity available for such systems. CAHWs have made key unsolicited reports that led to the detection of World Organisation for Animal Health (OIE) List A diseases in the past. For example, CAHWs made an early report of an emerging epidemic of respiratory disease in camels. Furthermore, in Uganda and southern Sudan, CAHWs uncovered rinderpest foci (Box 4). Taking lessons from mass communication and the improved use of mobile phone technologies could greatly enhance the success of community-based health approaches, including CAHW systems (53).

Communication constraints to pastoralist development

Bessette (56) defined development communication (DevCom) as the ‘planned and systematic application of communication resources, channels, approaches and strategies to support the goals of socio-economic, political and cultural development’. Many challenges confront DevCom, and communication in general, before it can be used effectively for social, cultural and economic development in pastoralist areas. Chief among them is the limited application of participatory approaches and strategies by governments and other development agencies when dealing with pastoral development. They usually employ one-way communication strategies intended to spread the desired information among the pastoral community. Even when they adopt two-way and participatory approaches, they tend to restrict such approaches, involving the local community only as information providers when these stakeholders want to gather more data. They do not open up the decision-making process so that pastoralist communities can become actively involved in determining their own affairs (6, 17, 35).

The second major challenge is weak capacity, reflected by poor infrastructure (such as telecommunications, roads, electricity, etc.), and the resulting restricted coverage of information and communications technology (ICT) services, the general unaffordability of ICT services and equipment, and the lack of necessary training and skill

among pastoralists to operate or maintain the communication technologies available (42, 57, 58). Even where ICT services, especially community-based programmes, are available, the messages tend to be exogenous. The content of general Web-based media is of little practical use in improving the livelihoods of marginalised people (17).

A third basic constraint is the low priority given by governments and policy-makers to the development of pastoralism, due to the marginalisation of pastoralism as an 'unsustainable production system', despite evidence to the contrary (35, 59, 60). Pastoral development challenges are multi-faceted and require a multi-disciplinary approach. Communication barriers arising from boundaries in scientific disciplines pose another challenge for pastoral development (61).

The way forward

The successful use of DevCom to develop pastoralism calls for fundamental change. First, the approaches of governments and other development players should be informed and guided by the concept of DevCom as a tool not only to disseminate and exchange information but also to involve and empower.

Secondly, greater emphasis must be placed on building capacity. The expansion of key infrastructure, such as telecommunications, electricity, roads, and other ICT facilities, is crucial. Facilitating pastoralist access to

affordable, easily operable and durable ICT technologies and services is equally important.

Third, there is a need to devise ways in which modern communication tools and systems can be effectively integrated with indigenous pastoralist media, in a manner that enhances the capacity of both systems. In this way, we can add an effective tool for improving the livelihoods of pastoralists and bring about sustainable pastoral socio-economic development. Such integration should aim at synergy, so as to further the development and acceleration of communication in pastoral areas.

Finally, information and communication can never be substitutes for structural change in the wider context of pastoral livelihood systems. Social, political and economic forces and unequal power structures are barriers to social change. DevCom approaches to pastoralism must therefore take these constraints into account.

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La communication au service du développement du pastoralisme

M.A. Seid, L.W. Yoseph, U.W. Befekadu, A. Muhammed & Z. Fikre

Résumé

La communication est vitale pour le développement socio-économique et culturel des pasteurs. Utilisée de manière constructive, la communication peut contribuer à créer un environnement propice au changement et à la modernisation. Les auteurs s'efforcent de déceler les tendances de la communication en tant que soutien du développement pastoral, en soulignant les méthodes de communication tant traditionnelles que modernes et leurs principales contraintes. Cette étude révèle que l'échec fréquent des interventions du passé visant à développer le pastoralisme s'explique par le fait qu'elles adoptaient des méthodes de nature centralisée, « du haut vers le bas », et qu'elles dépendaient de stratégies et de canaux extérieurs qui négligeaient les savoirs autochtones ainsi que les systèmes de communication des pasteurs. Les pasteurs utilisent leurs propres systèmes de communication bien établis pour partager les informations sur les

condiciones climáticas y ecológicas así como sobre cuestiones económicas, sociales y políticas. Recurren cada vez más a las tecnologías modernas de comunicación, en particular la radio y la telefonía móvil para acceder a las informaciones y actualidades regionales. No obstante, el desarrollo pastoral en el sector de las comunicaciones se enfrenta actualmente a la incapacidad de diversas agencias de desarrollo y partes interesadas a recurrir a métodos participativos, así como a una escasez de infraestructuras y de capacidades. Los autores recomiendan privilegiar los métodos de comunicación participativos e integrados, mejorar las infraestructuras y reforzar las capacidades.

Mots-clés

Afrique – Communication – Communication moderne – Communication traditionnelle – Développement – Éthiopie – Pastoralisme.



Comunicación al servicio del desarrollo del pastoreo

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Resumen

La comunicación es vital para el desarrollo socioeconómico y cultural de las sociedades pastorales. Utilizada constructivamente, puede ayudar a crear condiciones propicias para el cambio y la modernización. Los autores tratan de desvelar una serie de tendencias en materia de comunicación como parte del desarrollo pastoral, haciendo hincapié en los métodos de comunicación tanto indígenas como modernos y en los factores que actualmente constriñen su buen funcionamiento. El estudio aquí descrito demuestra que en el pasado las intervenciones de desarrollo pastoral han sido a menudo poco fructuosas porque respondían a planteamientos centralizados y «descendentes» y reposaban en estrategias y canales externos que hacían caso omiso del conocimiento indígena y de los arraigados sistemas de comunicación propios de las sociedades pastorales que sirven para compartir información sobre condiciones climáticas y ecológicas u otras cuestiones de índole económica, social y política. Los pastores utilizan cada vez más las modernas tecnologías de comunicación, en especial la radio y el teléfono móvil, para mantenerse al corriente de la actualidad regional. No obstante, por lo que respecta a las comunicaciones, el desarrollo pastoral se ve lastrado actualmente por el hecho de que diversos interlocutores y organismos de desarrollo no apliquen métodos participativos, a lo que se añaden las deficiencias en materia de infraestructura y capacidades. Los autores propugnan por lo tanto la aplicación de planteamientos más participativos e integrados para abordar las cuestiones de comunicación, junto con la expansión de las infraestructuras y el fomento de las capacidades.

Palabras clave

África – Comunicación – Comunicación indígena – Comunicación moderna – Desarrollo – Etiopía – Pastoreo.



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