Analyzing Sub-Saharan Livestock Rangeland Development

Emery M. Roe

Charles Scifres (1987) reminded us in a Journal of Range Management article that approaches to research on U.S. range resource issues have not been sufficiently interdisciplinary in the past, where our "overall task requires focusing of the coordinated expertise of representatives from appropriate plant, animal, and social-economic sciences." Interdisciplinary approaches to livestock rangeland issues in Sub-Saharan Africa are also sorely needed. This paper outlines one such approach. A framework for analyzing government-sponsored livestock and range activities is described and justified for the Sub-Saharan livestock rangeland sector and its implications for development interventions are drawn. The framework focuses on the unpredictable fluctuations in funding that have become a key factor in government projects, policies, and administration. The analysis's major implication is that those involved in these interventions have to better understand and adapt to these instabilities than has happened in the past.

The Analytic Framework

The framework identifies the primary sources and responses to government funding instabilities. Instabilities are unpredictable and frequent fluctuations occur in preparing, allocating, and spending government funds. Their causes can be conceived as external or internal. For example, the cost of livestock watering equipment may suddenly rise due to factors outside the country, while cost increases in water pumping may be the result of changes in local aquifer levels.

The resulting government funding fluctuations are macrobudgetary (government-wide) or microbudgetary (specific to ministries or departments): Macrobudgetary instabilities typically arise because of high-level government decisions affecting the livestock rangeland sector at the national level, while microbudgetary funding fluctuations affect decision-making in lower-level government departments, field projects, and line items for sector activities at the local or regional levels (LeLoup 1988). What is increasingly observed in the Sub-Saharan livestock rangeland sector is that these funding fluctuations have become cycles of over- and underregulation at the macrobudgetary level and cycles of boom and bust budgeting at the microbudgetary level.

Cycles of overregulation and underregulation occur this way: A government proceeds to adopt more and more regulations that are increasingly restrictive with regard to the rapidly growing problems of concern. As the number of regulations increase, the regulatory process becomes more time-consuming and the pace of implementing regulations slows down. The slower the implementation and faster the growth in the problems, the more the problems appear underregulated. The more underregulation, the greater the pressure on government to micro-manage problems by adopting newer and tougher restrictions. But more numerous and stringent regulations slow even further the pace of implementation, and the cycle begins anew. Funding fluctuations often arise in this micromanagement cycle because the slower pace of implementation leads to schedule slippage and spiraling production and regulatory costs beyond those originally estimated. External micromanagement in the form of a donor's highly bureaucratized project and purchasing cycle, along with internal micromanagement in the form of a local government's red tape, have long been familiar to U.S. livestock range-land specialists working in the Third World generally and in Africa specifically.

Boom and bust budgeting has become the dominant cycle driving...
funding instabilities at the macro-budgetary level. For example, exogenous price increases in the country's main exports unexpectedly lift the government's revenue constraint, which seemingly removes the cap on expenditures for an indeterminate period of time. Domestic inflation is fueled by continuous government overspending in this period of rapid economic growth. The inflation, combined with an unexpected economic downturn in the consumers of the country's exports, leads to an economic downturn in the country itself. Government efforts to exert greater expenditure control on the budget—estimates cutting, expenditure freezes, lowering budget ceilings, and other government-wide re-trenchment efforts—increase as a result. They prove only partially effective, however, and remain a continuing cause for concern during the period of economic decline, or at least until the next exogenous price increase in exports (Omolehinwa and Roe 1989). This cycle is found in governments across the world and when it comes to boom and bust budgeting, oil-rich Texas and Nigeria are not all that different.

At first glance, the two cycles do not appear to be related, but they are in an important and pervasive way. In theory, macrobudgetary spending limitations have to be complemented by restrictive microbudgetary program decisions if growth in the government budget is to be controlled (Schick 1986). In practice, micromanagement intensifies at precisely the time when the pressure for expenditure control is the greatest, as in an economic bust. The period of economic downturn then further deepens under these increasing costs of overregulation (as in the case when government expenditures have to be individually approved above some very small amount).

Implications for Livestock Rangeland Development

The related cycles have a profound impact on African livestock rangeland interventions in at least three ways:

(1) We can now understand the trend toward and persistence in donor direct payment practices and increased involvement in the development of Africa's livestock rangeland sector by non-governmental organizations (NGOs) and private voluntary organizations (PVOs). Under direct payment procedures, the donor deposits funds directly into a bank account at or near the project site. Using these funds, the project's technical assistance personnel then purchase goods and services outside normal procurement channels of the local government. This allows the donor to by-pass the local government budgeting and purchasing procedures which are vulnerable to micromanagement and boom and bust cycles at the same time.

Direct payment does not release technical assistance personnel from the donor bureaucracy's funding instabilities, but many non-governmental and private voluntary organizations take considerable pride in not being nine persons deep between Washington and the field site. Moreover, some appear to be relatively successful: By working through private voluntary or non-governmental organizations as well as local grassroots groups, the U.S.-funded African Development Foundation has gone a long way in developing an alternative approach for financing some of the same kinds of livestock and agricultural projects funding by USAID in the past (U.S. Congress, Office of Technology Assessment 1988). Pressure from the non-governmental and private voluntary organizations for increased local-level presence in Subsaharan Africa will probably grow, particularly if the major donors increase, rather than decrease, their micromanagement from afar. As such, prospective university graduates in livestock production or rangeland management looking for jobs in Africa should expect to find more of them in these ground-level intermediary organizations.

(2) Local governments generally and some donors specifically look on direct payment, special project units, NGO/PVOs and the like with understandable caution. Accordingly, livestock rangeland specialists who feel compelled to work within a government bureaucracy must come to some accommodation with the micromanagement and boom and bust budgeting cycles. Several design implications for the government-sponsored livestock rangeland interventions follow.

First, successful interventions are most likely to require both micro and macro components. It is not good enough for the government intervention to be just a project. It needs to be supported by policy as well. The interventions cannot take place only in the field, but should also have a presence in the capitol as well. Moreover, its focus must not be solely on local livestock and herders, but requires also the willingness and ability to work with regulators, policymakers and budgeters at the headquarter. Second, accommodating ourselves to the cycles means in practical terms designing livestock rangeland interventions whose very success depends upon having a place in micromanagement and boom and bust budgeting (Roe 1989). If our objective is to work within the government system and develop sustainable and replicable interventions, livestock rangeland specialists cannot be preoccupied with interventions that are successful in spite of government funding fluctuations. The goal is not to gamble on the periodic circumvention of instabilities, but rather to find better and more frequent ways to accommodate them without compromising the objectives of better range and livestock management.

(3) Unable to work outside normal government channels or use those channels more productively, donors are beginning to withdraw from the livestock rangeland sector. Those who stay will continue to be opportunistic: The best they can do in these circumstances is to seek out the "right" department, director or district for their projects, even when these efforts end up in some ministry other than that for livestock. What the above framework highlights is the priority that a local government's political stability should have in the opportunistic search strategies.
Government micromanagement and boom and bust budgeting are preeminently matters of a nation's political economy, and the best buffer against their worst excesses is a politically stable government. Indeed, experience shows that politically stable governments—not unstable ones—are in better position to risk letting market forces help correct inefficiencies and inequalities in the livestock rangeland sector. The dictates of geopolitics may compel donors into supporting politically unstable governments, but livestock rangeland specialists are under no obligation to do the same. The economic success stories of Subsaharan Africa—Botswana, Kenya, Cameroon and other relatively stable governments there—present all the challenges that a livestock range specialist could ever want to confront.

**The Need for a New Approach**

Why not just try to solve the problems of government micromanagement and boom and bust budgeting rather than accommodate ourselves to them? By this point it should be clear that there is no loose thread that unravels these problems. We can try to get governments to treat their booms as if they were busts and encourage them to conserve the riches of their booms for use in the livestock rangeland sector thereafter. Similarly, donors can try to convince the local government that its funding instabilities are a defacto tax on development and, consequently, the donors should be allowed to spend the bulk of their development resources outside the government's budgetary process.

We can and should do much more to reduce paperwork and streamline financial requirements for donors and local governments. These efforts can only go so far, though, since micromanagement and boom and bust budgeting are structural, pervasive, and mutually reinforcing cycles. They are here to stay, at least for the foreseeable future, and not just in Subsaharan Africa. The cycles are not barriers across the road to development to be removed with a little pushing and ingenuity. They are now part of that road itself, equivalent to those unexpected twists and turns that have led us in equally unexpected directions. The immediate challenge for the remaining designers of livestock rangeland interventions is to be better prepared. In particular, what is needed are not only livestock rangeland specialists to do the driving, but those from other disciplines to map where we are and why we have ended up in increasingly unfamiliar terrain.

For a very long time the terrain we were passing through, at least south of the Sahara, was synonymous with livestock and range. The list of past and current efforts to stimulate Subsaharan Africa's arid and semi-arid lands is a long one, and would include the development of livestock watering supplies, individual and group ranches, improved sheep and goats, agroforestry, range rehabilitation, wildlife management, improved draft animals, water harvesting, livestock credit and insurance, hides and skins improvement, increased fodder production, livestock training and extension, beekeeping, enhanced animal nutrition, pig and poultry projects, rotational grazing schemes, marketing cooperatives, better stock routes and holding grounds, top-flight veterinary services, zero grazing, cattle dips, camels, livestock breeding and crop research, dissemination of livestock price information, and improved livestock prices generally. As the list's length indicates, the accent on livestock and range has been preeminent in the development of Africa's drier regions.

Now that pre-eminence is under threat. For example, David Lewis, a regional planner and head of Cornell's Institute of African Development, recommends that development of Kenya's arid and semi-arid lands start with its comparative advantage in infrastructure. Some towns in Kenya's arid north are better connected by good road to parts of Ethiopia and Sudan than are those countries' own capitols. Similarly, transport links between Kenya's arid and semi-arid areas in the south and northern Tanzania are much better than between Tanzania's capital and the same area. The large Wajir airport in northern Kenya could be utilized for overseas freight shipments (including livestock products) and might also provide the foundation for a dynamic free-trade re-export processing zone, in Lewis's view (Republic of Kenya 1988). What makes such a recommendation all the more notable is that the lack of infrastructure has commonly been the focus of supporters of livestock and range development in Kenya's dry regions, as the above list amply suggests.

Lewis's proposal is subject to the very same implementation problems that have confounded development interventions in livestock and range. Yet here is a demonstrably new way of looking at some of Africa's arid and semi-arid lands, and one having implications for livestock production and herder income there. Innovative and interdisciplinary proposals, such as this, should however be initiated by livestock rangeland specialists. This article's analytic framework provides only one of many possible interdisciplinary approaches to Subsaharan dryland production that can be taken from within the livestock rangeland profession itself. If our profession is to remain at the forefront of Africa's dry zone development, it must provide leadership for the other disciplines or risk being overtaken by them. There is no better way to demonstrate that leading role than for U.S. graduate programs in range management and livestock production to increase their networking, consulting and job placement activities with the many multi-purpose non-governmental and private voluntary organizations working south of the Sahara. An expanded role for the Society of Range Management in these initiatives is also indicated.

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**Literature Cited**

Cheatgrass: Management Implications in the 90’s

Thomas C. Roberts, Jr.

Cheatgrass and its problems aren’t new. In 1965 the Oregon-Washington State Office of the Bureau of Land Management (BLM) sponsored a 3-day workshop on cheatgrass and medusahead in Vale, Oregon. The subject matter included rehabilitation of cheatgrass ranges, seeding methods, and the autecology of cheatgrass. Since then we’ve spent over 20 years on the same subjects and learned little more. While it is true that we have added to the background of knowledge, it is my contention that there is a great need for newer or better methods of rehabilitation of cheatgrass ranges, including slowing down its spread and mitigating the huge rehabilitation or fire suppression costs.

We can find literature that notes the “beneficial side” of cheatgrass. Most recently, James Deflon’s article in the February 1986 Rangelands, “The Case for Cheatgrass” has generated a great deal of discussion. Murray, Mayland, and Van Soest thoroughly documented the growth and nutritional value of cheatgrass in southern Idaho, in 1975.

I will center my discussion on the country that I know best, the Salt Lake District of the BLM. The District encompasses the public lands of Box Elder, Rich and Tooele Counties in the northern third of Utah. It includes over three million acres of public land. The following are some facts germane to the subject:

- Acreage of land growing cheatgrass: 900,000 acres including Box Elder and Tooele Counties.
- Acreage of cheatgrass or cheatgrass-dominated land burned in wildfires: In the last 11 years over 235,000 acres in Box Elder and Tooele Counties.

Average annual fire suppression costs (over the period 1981–1988): $152,867.

Approximate average acreage rehabilitated (through reseeding efforts): 7,900 acres.

**Dependability as a forage:** Many ranchers depend on cheatgrass as their primary source of forage in the spring. The lack of dependability of cheatgrass as a forage species is one of the arguments that we as land managers use when telling permitees that managing for cheatgrass isn’t a good management goal. During the wet years in the early 1980’s, the cheatgrass on some allotments in Box Elder County was tall enough to be cut for hay. I am sure that the permitted cattle could not graze fast enough to keep up with the growth. Conversely, I have expressed concern to the sheepman or cattleman during a drought year that their grazing fee could go for naught. The storms had not come in and the cheatgrass was hardly an inch tall. I realize that we are far from the first to notice the undependability of cheatgrass as a forage. In 1939, Stewart and Young reported that there was less variation in forage production for perennial grasses than for cheatgrass. They reported that the perennial grasses produced twice as much herbage as cheatgrass in a moist year and 12 times as much herbage on a drought year. Discussions have even addressed the idea of licensing use in some allotments on an annual basis as is done on ephemeral rangelands. This would make more use of the cheatgrass when it is available.

**Economics:** Can we continue to fight rangeland cheatgrass fires and rehabilitate them? The costs of rehabilitating a cheatgrass fire, using an aggressive approach, can exceed $100 per acre. This includes seed, planting, protection fences, and contract administration. For example, in 1988, the contract costs for the seeding of a project came in at $26.00 per acre, for the equipment and opera-