

# **Introducing Research into Policy: Lessons from District Studies of Dryland Development in Sub-Saharan Africa**

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*This article describes the chief findings of research carried out in four African dryland areas to investigate the validity of the authors' 'Machakos hypothesis', and to derive lessons on appropriate enabling policies. The findings were subsequently submitted to in-country validation and dissemination exercises. The lessons learnt from these in regard to introducing research findings into country policy dialogues are set against the background of current discussion of this issue. The article also discusses uptake at the international level, because it tends to be at this level that development paradigms and practices are formulated and promoted into countries through donor and agency actions.*

## **1 Background**

The publication in 1994 of a book carrying the provocative title, *More People, Less Erosion* (Tiffen et al., 1994), signalled a more polarised debate, if not the beginning of a paradigm shift, on the relations between population growth, poverty and natural resource management in African drylands, and the appropriate policy response to the complex changes taking place. The radical perspective of this work consisted essentially of the finding that small-scale and poor farming households, given enabling policy environments, can accomplish substantial investments both in sustainable natural resource management and in diversifying their livelihoods, which is an essential strategy in risky drylands. Thus a growing rural population and a well-managed natural resource base are not incompatible, and improved farm productivity and income are appropriate targets for public policy, alongside the promotion of alternative income opportunities.

The wide use made of this book, which is based on a study of a small part of Africa, the then Machakos District of Kenya, was a major reason why we sought

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funding for comparative work in West Africa. Once this was received from the UK Department for International Development (DFID) in 1998, Drylands Research, with its partners, undertook a study of economic, social and environmental change, 1960-2000, in semi-arid districts of four sub-Saharan countries:

- Makueni District, Kenya (part of the former Machakos District, which was divided in two in 1992);
- Diourbel, Senegal;
- Maradi, Niger; and
- the Kano region in northern Nigeria (mainly Kano, Jigawa and Katsina States).

This will be referred to hereafter as the four-country research, to distinguish it from the previous Machakos study.

The partners were individuals based at the University of Nairobi (Kenya), led by Dr Francis Gichuki; a consortium of researchers and consultants working with the Institut Sénégalais de Recherches Agricoles (ISRA) and the Centre de Suivi Ecologique (CSE), led initially by Dr Abdou Fall and later by Dr Adama Faye; a group from the Université Abdou Moumouni, Niamey, and from the Institut National de la Recherche Agronomique du Niger (INRAN) led by Dr Yamba Boubacar; and a group from Ahmadu Bello University and the Institute for Agricultural Research, both in Zaria, Nigeria, led by Dr J. A. Ariyo.

The results, published in a series of Working Papers (now available at [www.drylandsresearch.org.uk](http://www.drylandsresearch.org.uk)), were not aimed solely at confirming the 'Machakos hypothesis' of possible positive linkages between population growth and environmental management. They also aimed specifically at identifying policies which had helped or hindered good resource management, farmer investment and growing incomes over time (1960-2000). The results suggest a range of policy responses adapted to the particular historical, political, environmental and economic circumstances of each country and its dryland regions. DFID subsequently funded small-scale exercises in each country (in 2001-2) to gain endorsement from the relevant constituencies, and to promote entry of the findings into local and national debate.

## 2 Levels for research-policy dialogue

Before describing these exercises and their lessons, it is necessary to identify the chief policy lessons derived from the four-country research. However, the mode employed for targeting research findings – for endorsement or for policy debate – depends on the appropriate level for debate and possible action. We distinguish four levels:

**(i) International.** This level can be conceived of as the outermost ring in a concentric system of spheres, where the innermost is the research site or community, and the national and sub-national levels fall between.<sup>1</sup> At the international level, findings interface with the policies of aid agencies (bilateral or multilateral) and their research divisions, and with research institutions (such as the Consultative Group on

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1. Another DFID research programme (Natural Resources Systems Programme) has developed such a model for implementing its communications strategy (DFID Natural Resources Systems Programme, 2003).

International Agricultural Research) which have their own, often influential, links with donors. Communication modes are published or unpublished documents, workshops, networks, etc. There may be little direct participation by beneficiaries. However, there is a link to national policy through the pressures which aid agencies can apply to those governments which rely heavily on them for their capital and even recurrent budgets. Nationals know this, which can make them suspicious of a research output which they see as largely donor-guided.<sup>2</sup>

**(ii) National.** At this level, findings may affect macroeconomic management, social policy, institutions or resource allocation. Strong national ownership of research findings is a prerequisite for policy influence, sometimes difficult where foreign funding is involved. In-country researchers have their own contacts and knowledge of policy processes, and are best qualified to take the dialogue forward. Promotion of dialogue depends on the relevance of the findings to the priorities occupying public attention. In the article we shall show how this applied in our four countries, with special reference to Senegal, where the activities coincided with a major debate on the future of agricultural policy.

There is a strategic choice at the national level, between participating in state-sponsored processes such as sector-wide approaches or Poverty Reduction Strategies (bureaucratic mode), and obtaining leverage on decisions by representative bodies (political mode). The latter loops back to the sub-national level (iv) below, where elected representatives have their power base. A bureaucratic rather than a political mode may seem more familiar to researchers and professionals, but is not necessarily participatory. In any case, in addition to technocrats and civil servants, politicians, pressure groups or the media may be significant actors in bureaucratic decisions.<sup>3</sup>

**(iii) Sectoral.** Here, findings are the concern of a particular line ministry. The most important policy-makers at national level may be out of touch with on-going change at local level, where officials are driven by the resources and directives issued centrally. The latter may or may not interact effectively with farmers or traders, or even with the village authorities who have a direct knowledge of local agendas, for want of resources to overcome distance, language or other barriers. However, they have a grasp of technical issues, and are open to relevant technological outputs. The bureaucratic dialogue mode is the most efficient approach, provided it takes account of the limitations on their resources and freedom of action.

**(iv) Sub-national.** For our purposes, this includes elected and hierarchical authorities with various degrees of autonomy in funding and powers; the Nigerian State

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2. '... interviewees were wary of an additional influence international donor organisations may have over indigenous research, through their role as shapers of dominant development paradigms and therefore definers of research programmes and foci' (Coe et al., 2002: 3).

3. Interviewees in Uganda, South Africa and India thought that research information flows through five channels (Coe et al., 2002: 4): (i) insider influence, such as policy units (bureaucratic mode); (ii) academic, via the undergraduates trained for government service (indirect bureaucratic mode); (iii) networking organisations in the public domain, described as a long-term route to generating discussion and debate on new thinking (political mode); (iv) community organisations acting as catalysts for change at grassroots level (political mode); and (v) media, public opinion and action (political mode).

governments are very different from the county councils in Kenya, for example. It also includes interest groups which vary in purpose, composition, formality, recognition, language of operation (ethnic, lingua franca, national or international) and access to international or national NGOs, the media or line ministries. Examples in this study are formal producers' organisations in Senegal, religious brotherhoods, Muslim in West Africa and Christian in Kenya, and traders' organisations in Nigeria. Research-policy dialogue at this level must engage with participatory institutions and is intrinsically political, unless the researcher is involved in actions that deal with individuals in isolation. Particular groups may need to carry recommendations upwards in the political hierarchy.

### **3 The four-country research**

#### *3.1 Objectives and methods*

The common objectives of the four country studies were:

- to obtain a better understanding of the responses of smallholders in semi-arid environments to environmental, economic and demographic change over the past 40 years;
- to derive policy lessons for enabling measures that would enhance their ability to invest and to develop their natural resources and their livelihoods in future; and
- to validate or refine the 'Machakos hypothesis', which can be summarised in the statement that under the right conditions there may be positive linkages between population growth, agricultural intensification and the improvement of livelihoods.

The main work in each district was carried out by in-country scientists, each constructing a profile of long-term change (1960-2000) on a theme, and using appropriate methodologies, co-ordinated by a national research leader. The Nigerian study, however, was thematically restricted for financial reasons. At inception workshops, the conceptual framework and research hypotheses and methods were agreed. At mid-term, preliminary findings from the profiles were discussed with administrators, community leaders and farmers at district-level workshops, and with interested researchers and policy-makers at a national workshop (except in Nigeria). Drylands Research staff participated in all of these. Afterwards, the country team leaders collaborated with Drylands Research in writing a country synthesis.<sup>4</sup> In Senegal this followed some additional investigations recommended at the mid-term workshop. A preliminary synthesis of findings in all four countries and policy implications was discussed at an international workshop of researchers and donor representatives, held in London in January 2001, which was attended by country team leaders (Drylands Research, 2001).

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4. The profiles and syntheses were published as Drylands Research Working Papers, 1-39 ([www.drylandsresearch.org.uk](http://www.drylandsresearch.org.uk)).

The comparative framework of the policy analysis was strengthened by working in both francophone and anglophone countries. These have different financial links, institutions, research traditions, business interests and sources of information, leading to the prevalence of different paradigms. For example, our francophone colleagues sometimes found a non-Malthusian view of population-environment relations innovative. The research-policy dialogue needs to take account of scientific understanding in the countries having close links with specific countries. DFID, for example, does not work directly in francophone countries, nor have their policy elites come to the UK for education.<sup>5</sup> These countries are relevant to the UK because of the proportion of British multilateral aid going to francophone countries, but dialogue needs to take account of differences.

### 3.2 Findings

Key policy-relevant findings were presented at the London Workshop. The main thrust of the recommendations is listed first:

***Farmer capability for investment is present, but requires an enabling policy environment to develop fully (Drylands Research, 2001)***

Capabilities to adapt to change and to respond to new opportunities were proven in all districts, despite their erratic rainfall and risky semi-arid environment. Therefore, removing constraints should be a policy priority. Improved access to markets is a widely felt need from the most densely populated of the districts to the least, whether the obstacles are infrastructural, informational or institutional.

***Population growth develops new land and urbanisation creates new markets***

Owing to long-term population growth and agricultural expansion, the land frontier had already closed by 1960 in Diourbel and Kano, while until the 1970s or even later, farmers in Makueni and Maradi could disperse to vacant, though less attractive, land (Gichuki, 2000; Barry et al., 2000; Tiffen, 2001). Increasing urbanisation in all four countries led to an increasing market for foods those semi-arid areas can produce, *if currency management and national subsidy policies allow*. For example, in Nigeria, there was a huge increase in the demand for local food, which farmers have met (Ariyo et al., 2001); whereas, in Senegal, policy favoured the import of rice and cooking oils (Gaye, 2000), and food production lagged (Faye et al., 2001).

Urban employment and trade provided an alternative to farm labour. In West Africa, seasonal migration retained – or increased – its historic importance, and in all countries, many young people have moved permanently to towns, but retain links with their rural families (Nzioka, 2000; Wilson Fall, 2000; Tiffen, 2001).

***Primary production was maintained on average and responded to market signals***

In West Africa, statistics do not show increases in the value of output per ha comparable to those achieved in Machakos up to 1987 (which had some areas suited to vegetable

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5. If they have non-francophone higher degrees, these are more likely to be obtained in the US or Scandinavia than in the UK.

and coffee production), but nevertheless they provide grounds for cautious optimism about smallholders' capacity to sustain output value. Notable examples are: maintaining millet yields per unit of rainfall in Senegal (while falling per capita and stagnating per ha) (Faye et al., 2000); maintaining average millet output per capita in Maradi, against declining average rainfall; and increasing the value of livestock in Maradi (Mortimore et al., 2001) and Diourbel (Faye et al., 2000).

Farmers have changed course in response to market signals. For example, in Diourbel, primary dependence for cash on groundnuts in 1960 was replaced by livestock and non-farm work by 1999 (Faye and Fall, 2000). In Maradi, the change was from groundnuts in 1960 to cowpeas and tiger nuts (in response to Nigerian demand) by the 1990s (Hamadou, 2000), and in Kano, from maize as a minor to a major crop during the 1980s (in sub-humid areas), and from groundnuts to cowpeas (in semi-arid areas) (Ariyo et al., 2001). Three districts increased numbers of livestock, and, consequently, fodder became more valuable.<sup>6</sup> Such responses reinforce the importance of policies that affect market signals (tariffs, taxation, state monopolies, exchange rates, inflation), and, additionally, policy on infrastructure that gives access to, or information on, markets (roads, telephones).

***Notwithstanding the moisture constraint, agricultural intensification and soil fertility management are evident***

The four districts have reached different levels in a transition to more intensive farming, which is driven by land scarcity and increasing market values. As population densities increased, there was: an advance of the cultivated fraction, until the limit was reached (Mahamane, 2001; Gichuki, 2000); an increase in labour use per ha, and in West Africa, increased use of labour-saving technologies such as animal-drawn implements and carts (Faye et al., 2000; Hamadou, 2000).<sup>7</sup> There was also an increased integration of livestock with crop production, including recycling nutrients through manuring and use of crop residues for fodder (Tiffen et al., 1994; Badiane et al., 2000b; Moussa, 2000; Issaka, 2001; Harris, 2000).

Soil fertility indicators are not good enough to show historical overall decline, but analyses of present-day soils shows a clear division between more sustainable regimes on infields (where integrated or 'agro-ecological' practices are applied), less evident on outfields (where the decline of fallowing and the high cost of inorganic fertilisers have created a crisis) (Mbuvi, 2000; Badiane et al., 2000b; Issaka, 2001). The proportion of infield land rises as farms are subdivided.

***Securing access to land has not until now been a general constraint***

Customary tenure systems recognised rights of individuals, or adapted in order to do so, under pressure from the scarcity of still-unclaimed resources, and the subdivision of resources with recognised claimants. This led to more security and investment, but also to more individualisation, competition and inequality (Boubacar, 2000). State nationalisation of land, introduced with the best of intentions, may fail to take adequate

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6. Makueni was the exception, with farmers complaining about the toll of livestock disease.

7. This has also been illustrated in Nigeria, with the uptake of the ox plough in the 1970s and '80s in areas such as Kano and Sokoto (World Bank, 1995b; Adams and Mortimore, 1997; Swindell et al., 1999).

account of local interests, increasing rather than reducing uncertainty (Lo and Dione, 2000).

***Changes in the nature of the rural family and its financial management have responded to new needs and opportunities***

The nature of the rural family is changing. Family residences can be spatially separate – partly in old and new farm areas, partly in urban areas (Wilson Fall, 2000). While family units headed by adult children have independent incomes, there are financial flows between closely related units, to meet varying needs and investments (Nelson, 2000). In Kenya, primary education of children is regarded as a priority call on funds, and secondary school fees, which may lead to a skilled non-farm job, are afforded if at all possible (Nzioka, 2000). Parents in Diourbel (Wilson Fall, 2000) and Maradi (Diarra Doka, 2001) do not see a French language primary school as either relevant, or in tune with their Islamic social norms, and obtain unskilled work via social and religious networks.

***Incentives to invest, provided by good policy, have produced a response***

People make choices to invest in the farm, in family human capital, or off-farm. Macroeconomic policies affect both their ability to accumulate resources and the direction of investments. Private farm investments have been largest in Kenya, large in Nigeria and Niger, and small in Senegal (except for livestock) (Gichuki et al., 2000; Faye et al., 2001; Mortimore et al., 2001). Too much emphasis on credit provision can divert attention from the value and sustainability of private investments, and in a risky semi-arid environment it can bankrupt both borrower and lender.

## **4 Research and development policy**

Research-policy interaction and the methodologies for putting research results on to the policy agenda have recently been discussed in relation to development. There are common paradigms that ‘serve to define the problems that are to be addressed’ (Stone et al., 2001: 7). Examples are state intervention in marketing, believed to be necessitated by the immaturity of the private sector (1960s), the market-oriented ‘liberalism’ which replaced it (1980s), and the population-environment-poverty nexus (1990s). The role of researchers is ‘to provide the foundations for alternative paradigms’ (ibid.). The plural is important: it usually requires several pieces of research that come together to challenge the paradigm.

The newness of a finding is important. If it challenges an accepted paradigm, it will attract opposition and controversy, which may be helpful in debate, but also risks that it will be disregarded. Findings that simply require some modifications to existing policies are more easily put into practice, and for them the bureaucratic mode may suffice.

### ***4.1 The challenges to preconceptions in this research***

***It can pay to invest in drylands***

For many years, governments and donors have debated the relative merits of investing their funds in low- or higher-potential agro-ecological regions. This research confirms

that dryland communities – including poor people – have all along been willing and (to an unexpected extent) able to sustain small-scale private investments in natural resource-based livelihoods.<sup>8</sup> Policy statements affecting drylands often betray a perception of victim status (for example, with regard to drought), extreme poverty (with regard to incomes and productive capacity), or culpability (with regard to environmental degradation). While these perceptions may accurately characterise a minority, they do not describe the potential of dryland peoples as a whole. These studies add to the growing volume of knowledge that is available on which to base an enabling policy framework.

***The positive linkage between population growth and natural resource management depends on intensification, which requires investment capability which not all farmers possess***

A positive linkage between population growth and natural resource management, as proposed in the ‘Machakos hypothesis’, can also occur under West African conditions. However, it is also clear, from both the Senegal and Niger cases, that agricultural intensification requires additional capital and management inputs (Faye and Fall, 2000; Mortimore et al., 2001). While many can provide this, a substantial minority of farmers can not, and these need to explore alternative uses of household labour.

***Urbanisation can have a positive impact on rural resource management***

A long-standing antipathy to rural-urban migration, held by many policy-makers, is challenged by the finding that rural-urban linkages, including the movement of labour, capital and commodities between the sectors, furthers market growth, productivity and efficiency in the rural sector.<sup>9</sup>

The challenge to existing paradigms varied from country to country. For example:

- *In Senegal and Niger*, the research overturned an old paradigm of overpopulation and degradation requiring state intervention, in favour of recognising farmers’ capabilities and adaptability. In Senegal it also brought out the existence of two political and economic regimes which barely recognised each other – a francophone socialist state,<sup>10</sup> with a tradition of control and top-down intervention in markets and farm practices, and a society, initially mainly peasant, but increasingly incorporating urban elements, which looked to the Mouride religious leadership and utilised Mouride networks to develop its own commerce and markets, and which spoke indigenous languages (especially Wolof) and ignored French schools, and literacy in Roman script.<sup>11</sup>

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8. Reij and Steeds (2003) also identify 17 cases of public investment in dryland projects that showed a strongly positive return to investment.

9. See also Tiffen (2003).

10. The two-stage elections of early 2000, which brought into power M. Abdoulaye Wade, ending the monopoly of the Parti Socialiste in favour of the ‘politics of alternance’ (O’Brien et al., 2002) took place after the completion of the main research.

11. O’Brien (1975) and O’Brien et al. (2002) has written on the importance of the Mourides, but his earlier books are in English and less known in Senegal than they deserve.



- *In Nigeria*, it brought out the efficiency of indigenous trade in grains and livestock, based on production by smallholders and organically integrated markets which maintained supply and relatively stable real prices over time, despite an enormous growth in urbanisation. Nevertheless, currently, many important government policy-makers think that growing food needs can only be met by a large farm sector employing tractors and modern chemical inputs.
- *In Makueni, Kenya*, the findings confirmed and extended those of the previous Machakos study. They highlighted the priority given to education in family expenditures, and the problems arising from livestock disease, no longer efficiently controlled, which reduced the livestock's insurance value. Findings on the existing preference for maize rather than sorghum or millet, and the need for better private pasture management, were of most relevance to a line ministry.

## 5 The endorsement and dissemination exercises at national and sub-national levels

We adopt the hypotheses that quality research, local involvement, accurate messages and effective dissemination strategies are all important if the aim is more evidence-based policy-making, and that the relationship between researcher and policy-maker shapes how much influence they have over each other (Crewe and Young, 2002). The aim of the endorsement and dissemination exercises was to position the research findings, if validated, in the policy debate in the countries concerned, while recognising that policies are often developed by 'muddling through' (Stone et al., 2001) and that policy-makers compromise to meet conflicting aims and constraints, or proceed by incremental change which is less costly and difficult than fundamental change.

It was decided to target national and sub-national levels. Country leaders wanted to reach people who could influence the policy debate, but who had not necessarily been involved before (villagers, producer organisations, MPs, customary and religious leaders, etc.). Endorsement of the findings by villagers required the use of local languages, and their dissemination in the local language media (Hausa in the Kano region of Nigeria, and Maradi in Niger; Wolof in Senegal; and Swahili or Kikamba in Kenya).

The chosen method was workshops at some or all of four levels, at the discretion of team leaders:<sup>12</sup>

- with the research teams, to review and endorse the country syntheses (in which only team leaders had been involved);
- with farmers in the villages sampled;
- at district level with the village representatives and district leaders and officials together, using the local language as far as possible; and
- at a national forum.

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12. Drylands Research authors did not participate, not only because of a funding constraint, but also because it was felt that the research would deliver a more powerful message if it was locally owned and presented.

The programmes were carried out more or less as planned in Senegal, Niger and Nigeria, but took a more limited form in Kenya.

### **5.1 *The Senegal experience***

Under their team leaders, the researchers met in November 2001 to review the synthesis. This contained some unexpected findings, due to supplementary research after the mid-term workshop (for example, that many groundnut producers did not currently sell this, their 'cash' crop). A summary of findings was to be put to meetings in the four villages. Two key questions were:

- Was the rural population stable or declining (as estimated from the data) rather than increasing (as generally assumed in Senegal where a growing rural population was linked with environmental decline)?
- What was the present role and value of groundnut production, the export of which had always been regarded as the engine of the Senegalese economy?

At the four village meetings, which were open to anyone interested, it was confirmed in three that the resident population was no longer growing, because of outmigration by the young. In all four, it was affirmed that groundnuts remained highly important, but their uses were ranked as follows: family food; fodder (hay and meal) for fattening livestock, a profitable activity which also produces manure for their millet; and finally, a source of cash.

The government's view of the purpose of groundnut production as delivery to state-owned processing plants for export was contradicted by an increasing preference for local use and local sale. Villagers wanted to do more processing themselves. A central question for regional and national-level policy, therefore, was how to develop the internal market for groundnut products, challenging fiscal and other policies which favoured the import of lower quality oils for the consumer, and which discouraged local processing of groundnuts for local needs. This in turn opened up issues of state control of groundnut trading and prices.

Various circumstances had put the role of groundnuts at the forefront of the national policy debate. Since the 1960s, the government had endeavoured to ensure that the groundnut crop was sold, in shell, to state processing plants, to be exported as oil and meal. The state had controlled prices and arranged the supply of inputs, such as seed and fertiliser, on credit until 1984. Inefficiencies and corruption in the system led to the dissolution of the responsible organisation in 1980, with massive debts. Under a structural adjustment programme, credit was abruptly halted in 1985, and subsidies on rice and fertiliser were abolished or reduced (Gaye, 2000). Production of groundnuts fell to 500-600,000 tons in the 1990s (a million tons had been achieved in the early 1960s) (Faye et al., 2000).

This fall was perceived as the heart of an economic crisis facing the Senegalese state, which struggled to retain control of the crop. Prices remained fixed by the state, despite liberalisation for other products (Gaye, 2000; Wilson Fall, 2000; Faye et al., 2001). Two parastatals controlled the trade. The Société Nationale de Commercialisation des Oléagineux du Sénégal (SONACOS) processed groundnut oil and meal for export, and also imported and processed the cheaper soya and palm oils for sale to Senegalese

consumers. The Société Nationale des Graines (SONAGRAINES) was responsible for collecting and transporting groundnuts in shell to the factories during the official three-month trading season, and for distributing approved seed. Under partial liberalisation in the 1990s, informal traders were allowed to operate outside the formal three-month marketing season, dealing mainly in shelled nuts and artisan-processed oil and meal for the internal markets. The informal trade was stimulated by the devaluation of the CFA franc in 1994, securing between 60 and 70% of the output that farmers wished to sell (IFPRI, 1997).

The World Bank and IMF pressed for further reforms, and SONACOS has been on the programme for privatisation since 1995. Its growing level of debt is a burden on the state and probably deters private investors. It amounted to about \$84 million in 2000 (Ndiaye and Millet, 2001), and to around \$200 million in 2002 (warmafrica.com, 2002).

In March 2000, the Parti Socialiste finally lost power to a coalition headed by the veteran politician Abdoulaye Wade (O'Brien et al., 2002). The time was ripe for new discussions on the direction of policy.

In the meantime, following a long period of declining average rainfall (1960s to 1980s) (Badiane et al., 2000a), there had been three excellent rainy seasons, 1999, 2000 and 2001. The sudden change in groundnut production is shown in Table 1.

**Table 1: Annual production of groundnuts in Senegal (tonnes)**

1997	1998	1999	2000	2001	2002
551,394	579,067	1,014,247	1,067,951	959,859	532,936

Source: FAO (2002).

The large harvests caused problems for the parastatals, which were unable to buy all that was offered at the fixed prices, and even so were increasing their debts to the government. World Bank pressure increased. In November 2001, SONAGRAINES was abolished; the Bank believed its high marketing margin affected Senegal's competitiveness. Unfortunately, the private sector had had little time to obtain the necessary finance and vehicles before the new buying season for the 2001 crop opened in February 2002; it also had to adjust to a new system whereby payment was made only after delivery to the factory, not, as previously, at the point of collection. The official price was reduced from FCFA145 to FCFA120 per kilo, and limited to 400,000 tons. Many farmers did not know what was going on. Many accepted FCFA70-80 from traders prepared to pay cash on the spot. In March, 2002 Abdoulaye Wade toured the groundnut areas, blaming the World Bank for the disappointments, according to local newspaper reports, as he needed to win the local elections in May.

This was the background when our researchers tested their findings with the villagers in November, 2001. The village meetings were asked to appoint four or five representatives to attend a regional meeting in February, 2002. This was to be hosted by the elected Diourbel Regional Council, with invitations to representatives of national ministries from Dakar. Telescoping the meetings at regional and national levels was partly a response to financial constraints, and partly to secure attendance by some important Mouride leaders from their headquarters at the growing city of Touba, in

Mbacké Département of the Diourbel Région.<sup>13</sup> It was thought easier to get Dakar officials to Diourbel, than to get Mouride notables to Dakar.

At this point a presidential decree dissolved the Regional Council, along with all other local authorities, pending new elections in May, 2002. Hence a new basis for popular representation at the planned meeting had to be hastily found. Dr Adama Faye used his contacts to secure hosting by the Conseil National de Concertation des Ruraux (CNCR).<sup>14</sup> Swiss Co-operation enabled the participation of Dr Jacques Faye, who had recently been appointed to support a group producing an action plan for the agricultural sector, which has also been reviewed by the donors.<sup>15</sup>

It was decided to spend the morning in presenting the research results, and the afternoon in discussing their relevance to the Regional Development Plan, which would be critiqued by Dr Jacques Faye. It was further arranged that both Adama Faye and Jacques Faye would present in the local language, Wolof.<sup>16</sup> This innovation was greatly appreciated by the village representatives, and their vigorous participation in the subsequent debates surprised and cheered the other participants. It was decided not to invite aid agencies, but to confine invitations to Senegalese institutions.<sup>17</sup> The Ministries of the Environment and of Agriculture both sent a high-level official. The Deputy Governor of the Region, the Prefect of Diourbel Department, opened the meeting. His speech showed he realised that the research had reversed some preconceived opinions on the role of population growth and rainfall in environmental degradation, and the need to recognise and encourage the farmers in their rational search for ways to maximise returns to the scarce factors.

While these issues were at the heart of the original research, it was the role of groundnuts which attracted the most vigorous debate. After the presentation of the results, and given the government's inability to buy groundnuts, some officials suggested groundnut cultivation should be abandoned. Village representatives opposed this fiercely, arguing that groundnuts remain a key crop, not only for the cash they earn directly, but also because of their contribution to their profitable animal fattening enterprises. Their view won round the majority. There was also debate on why peasants were abandoning farming for commerce and non-agricultural activities. The farmers replied that they were following recommendations when these were practical, but advice to diversify into vegetables was impractical, given the water shortages in the area. They insisted on the necessity of being listened to by researchers, advisers and the state. This is not only a question of the language used, but of official readiness to feed

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13. Touba, second only to Dakar in size, is not officially 'urban', because it does not have a municipal commune, unlike towns which are local administrative headquarters. The Région in Senegal is equivalent in size to a Kenyan District, and the Département to a Kenyan Division.

14. The CNCR is a confederation of the nine producer organisations devoted to particular products and interests. It is seen as a leading speaker on agricultural and rural development questions, and it plays an important part in organising rural people and in defining rural policies at the sub-regional level. It had been found during our research that most villages were aware of this body (Wilson Fall, 2000).

15. Dr Jacques Faye is a former Director-General of ISRA, and Director of Research at CIRAD, France, and currently an independent consultant assisting producer organisations to make an input into policy debates.

16. Their PowerPoint overheads necessarily used French. While Wolof has become the common language for trade and communication amongst urban people, it remains almost entirely an oral language (O'Brien et al., 2002).

17. An exception was made for the British Embassy, in view of the origin of the funding, but it was not taken up. There was a representative of IFAD, which has a project in the area.

the views of rural people into development analysis. Ways to find new outlets for groundnuts and their by-products were then discussed. Farmers reiterated the need to follow up on points made in the village meetings (on the three roles of groundnuts, the lack of improved seed, local processing, and the importance of fattening, emigration, functional education, credit needs, etc.).

Dr Jacques Faye discussed the pertinence of the Regional Development Plan in the afternoon. He concluded that it ignored a good part of the regional economy:

- the huge growth of the city of Touba and its economic attraction;
- the important financial transfers back into the region made by migrants;
- the reduction of activities at the state oil mill at Diourbel, and at the government research station at Bambey, with consequent falls in formal employment;
- the likely impact of a new tarred road towards the Senegal valley.

In the subsequent lively discussion it was agreed that:

- farmers need to organise themselves to defend their interests when plans are made;
- there is a need to take non-agricultural activities into account;
- the importance of Touba and its market, as a regional pole of development, should be fully recognised, and that of the religious leaders;
- there is a need to attract migrants' earnings into business investments, since their remittances mainly fund consumption needs, housing, and festivities; and
- livestock are at the root of a new dynamic in farming.

The meeting was followed by a press conference on 21 February 2002 at Dakar (organised by CNCR). This highlighted a need for coherence between the strategies which rural people are evolving for themselves, and the government's policies on agriculture, rural development, and the future of groundnuts. The last issue was the focus of resulting radio and press discussion, as the most newsworthy question. CNCR then undertook a national tour, publicising the research and its results to its member organisations (Faye, 2002).

The continuing relevance of the research findings and their policy implications was demonstrated when the 2002 groundnut season proved poor (Table 1). By November, the newspapers were writing of the inability of housewives in the groundnut region to buy groundnut paste for their Ramadan meals. In local markets a kilo of groundnuts fetched FCFA150 while the official price remained at FCFA120 (*Le Soleil*, Dakar, 27 November 2002).<sup>18</sup> On 2 December 2002 *Sud Quotidien*, Dakar, was querying the competence of SONACOS in managing both its export and import activities, and hinting that important officials had interests in the imported oil trade. On 13 December, the government, in an attempt to enforce supplies of groundnuts to its factories, evoked old regulations and used the army to immobilise lorries at Louga belonging to traders attempting to supply internal demand. The president of the national union of traders and industrialists demanded to know why, after liberalisation, they could not supply

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18. fr.allafrica.com, accessed 22 January 2003.

consumers in Matam and Bakel, who did not grow groundnuts but wanted to consume them. Were these citizens irrelevant to the Senegal state? (*Sud Quotidien*, Dakar, 3 and 10 January 2003).<sup>19</sup> Traders also threatened not to sell groundnuts to the state at less than FCFA200, given that they were paying FCFA150-190 to purchase them.

The Senegal story is told in some detail because it illustrates the importance of:

- villagers' endorsement of findings when they challenge accepted paradigms. It was because they were in accord with villagers' lived experiences that the research team had the confidence to promote their findings;<sup>20</sup>
- the meetings at village level, which enabled their appointed representatives to come to the regional meeting, confident that what they said was the general opinion in their village;
- the use of their local language so that they were not inhibited in the debates;
- relevance to the political context. Senegal had arrived at a point where forty years of state control of the groundnut crop was ripe for challenge;
- use of network contacts by the researcher. Dr Faye was able to bring in a respected government consultant involved in its policy processes, and an influential, well-organised federation of interest groups, the CNCR, whose leaders had the languages, skills and contacts to interact with both the government and with the non-francophone traders and farmers they represented;
- the pressure groups whose interests are touched by the research findings, who can affect the local political agenda in a country with a free press.

## 5.2 *The Kenya experience*

The research in Makueni was designed to update the findings of the earlier Machakos study against a background of structural adjustment policies and economic recession, as well as to provide a better comparative framework for the West African studies. Makueni contains most of the semi-arid and arid areas of the former Machakos District, and is much less developed than the higher-potential areas that were settled first. Its capital, Wote, lacked a tarred road to Machakos (or to the Nairobi-Mombasa highway) until 2001; it had no telephones until 1999; it had no electricity or piped water when the research was carried out, and it is still too small to offer an important market to producers.<sup>21</sup>

It was of critical importance both to the research itself and to research-policy dialogue that the Machakos findings were already well known in Kenya. Four of the five members of the Makueni research team had participated in the previous Machakos research. The book on the study (Tiffen et al., 1994) had been made available locally in a low-cost Kenyan edition (Nairobi: ACTS, 1994), thanks to Rockefeller support. Subsequently, the Regional Soil Conservation department of the Swedish International

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19. fr.allafrica.com, accessed 22 January 2003.

20. Some researchers have since used them in fora other than the ones described here.

21. The results of the 1999 census have not been published in any detail, but it appears likely that towns outside the district have increased in size substantially since the 1989 census. Machakos is up from 116,000 to 143,000 and Nairobi from 1,324,000 to 2,143,000, according to [www.citypopulation.de/kenia](http://www.citypopulation.de/kenia), accessed 6 February 2003.

Development Authority distributed the book to Ministry of Agriculture officials in Kenya and East Africa. It was, in consequence, frequently referred to, especially by members of the Soil and Water Conservation Branch of the Ministry in Nairobi. It was undoubtedly one of the influences contributing to an attitude of respect for the farmers' own innovative capacity that is more common in Kenya than in some West African countries.<sup>22</sup> Dr Francis Gichuki, one of the authors of the Machakos study, has for many years contributed to the training of Ministry officials, and frequently acts as consultant to them.

The closing workshop of the Machakos study in 1992 had included some farmers to assist in the evaluation of its findings. Dr Gichuki had used this experience in the planning of the mid-term Makueni district-level workshop in November 1999, which provided two days of interaction with farmers from four villages, officials and other community leaders at Wote. Swahili or Kikamba or English were used as deemed appropriate in particular plenaries or work groups. (Many farmers had some English, but were happier speaking in local languages.) The preliminary findings provided no great surprises to those familiar with the Machakos study, though bringing out some important details listed earlier.

There was a second mid-term workshop on the preliminary results in Nairobi the following week. This drew a large attendance from ministries and aid agencies thanks to a wide interest in the earlier study, including two of the three members of parliament who represented the District, and a strong representation from the Ministry of Education, a result of the contacts of one team member. They were interested in the findings on the difficulties of parents in financing secondary education, and the possible potential of Youth Polytechnics as an alternative route to non-farm employment.

The continuity between the Machakos and the Makueni research, extending the validity of the earlier analysis in time (with an economic downturn), across space (into the driest agro-ecological locations), and under policy change (with structural adjustment), meant that the findings did not have the excitement of the new which was felt by team members and their audiences in West Africa. There has been a long debate in Kenya over the merits of concentrating government resources on the drylands, because of their perceived problems and poverty, and the highlands, because of their higher potential and large populations. This began in colonial times and resulted in several switches of emphasis, reviewed in Tiffen et al. (1994). At the time of the first Machakos study, there had been recent large aid-financed programmes in semi-arid districts. Some donors, including the United Kingdom, were arguing in the mid-1990s for a switch of attention to the higher-potential areas, on the grounds that they held the larger population and, therefore, two-thirds of the rural poor (World Bank, 1995a). However, amongst Kenyans, the policy issue of greater or lesser investment in the high-potential or the dryland areas was not a major matter for debate. At the turn of the millennium they were more concerned with changing the government and/or the Constitution, privatisation, cost-sharing, and corruption.

The Makueni research had been completed in 2000 and key members of the research team had already undertaken other commitments. The District itself rejected the first suggested date for a workshop because of the priority at the time of discussions

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22. This Branch was also influenced by the use of Participatory Rural Appraisal, introduced by IIED (Pretty et al., 1995).

on the Constitution, and there was difficulty in finding another convenient date for all parties. However, due to Dr Gichuki's good internal contacts with the Ministry of Agriculture, plans are in hand for the preparation of versions of the findings in popular, farmer-friendly format, to be distributed by the Ministry of Agriculture, which thereby in effect endorses the research findings.<sup>23</sup> Kenya thus illustrates the bureaucratic mode.

This case illustrates the importance of:

- allowing time for research to impact on policy through participatory processes. It is now nine years since the commercial publication of the Machakos study. The availability of the book has had an indirect impact on the Ministry of Agriculture, and on university teachers and the people they train. However, it is not possible to trace its wider influence;
- sustaining a presence, through an effective local constituency, allies among donors or NGOs, and local ownership of research findings. Local contacts and routes into policy discussions are vital, but key researchers there, as in developed countries, may move to new fields;
- recognising that the direct impact of a research project on policy formation is unlikely to be separable from that of other inputs to the process, and that public priorities at any given time may not coincide with researcher interests. In such a case, the bureaucratic mode (for example, influencing Ministry of Agriculture thinking on particular issues) is more likely to be possible than the political mode.

### 5.3 *The Niger and Nigeria experience*

Maradi is 1,200 km from Niamey, and contains a key branch of the Institut National de la Recherche Agronomique du Niger (INRAN), but most policies and decisions emanate from the capital. The federal constitution of Nigeria – as well as its long history of political and economic dominance in the region – confers some degree of autonomy on Kano State. It has its own university, several key agencies of the Federal Government and, nearby, the large Institute for Agricultural Research whose mandate is relevant to most of northern Nigeria. Besides sharing a certain distance from central government, both the Kano region and Maradi Department belong to a single cultural and economic region dominated by Hausa speakers. These two studies were integrated from the outset, in order to reflect these realities.

Research-policy dialogue in Maradi Department of Niger and Kano State of Nigeria began as early as 1995, with:

- an international research and policy seminar at Maradi, attended by representatives of research institutes in both countries and some government officials from Niger (conducted in French and English);<sup>24</sup>
- direct discussions with senior administrators (including the Prefect) in Maradi; and

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23. These will take the form of three serialised articles, written by the Country Co-ordinator, for the *Mkulima Newsletter* which is distributed free to farmers by the Ministry of Agriculture.

24. Funded by the Club du Sahel.



- visits to state and federal government departments and research institutions in Kano, to present and discuss the research aims and methods.

The research proposal (for Maradi Department) that was an outcome of these talks failed to receive funding because the donor concerned (Canada) cut off aid links with the government of Niger following a military coup early in 1996, while the work intended in Kano was impeded by sanctions by the UK against the Abacha regime in Nigeria.<sup>25</sup> Both became feasible in 1998 with the receipt of funding from DFID.

*In Niger*, the research and mid-term district workshop took place in July 1999 to the end of 2000, and the subsequent endorsement programme began early in 2002. As most of the research team had by then dispersed, the country team leader, Dr Boubacar, planned the activities with one colleague, Moussa Ibrahim Bouzou. They held meetings in the four study villages to present the research findings for endorsement and discussion. Attendance at these village meetings was 50, 100, 90 and 30 (including women), which reflected both local interest in the research findings and the novelty of being so consulted by researchers, who are usually never heard of again. Villagers endorsed the main finding that productivity-enhancing investments had become more and more crucial to success in farming. Issues frequently raised were: difficulties in obtaining and paying the price of fertiliser (which is distributed through formal channels), a lack of information about market conditions (and for some, poor access to them), perceptions of being exploited by private traders (though many of the villagers also trade), and the inadequacies of formal education.

Copies of the synthesis (including a Hausa summary) were distributed to government officials and organisations in Maradi in preparation for the Departmental-level workshop. This was held in Maradi on 6 May 2002, and attracted 40 participants from the villages, government and other agencies, and two of the researchers, Drs Yamba Boubacar and Mahamane Issaka of INRAN. Plenary discussions were in Hausa and in French. There were three working groups (in Hausa) on: agricultural inputs; education and information; and marketing alternatives. The farmers' representatives were interviewed by the Hausa language media.<sup>26</sup>

The interaction between researchers, villagers and policy-makers was strongly positive, although the villages are located a great distance from Niamey, where all but one of the research team were based. It was felt that the project went further than many earlier research studies in the Department had done in setting up a three-way communication, in which research was not only performed, but also reported and discussed. Village people are not at all cowed in open discussions with 'experts', provided that the language of debate is understood. The Maradi workshop was the

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25. It was understood that the proposal for a study of long-term change in Maradi Department was on the point of approval when Canada's policy change took place. With regard to Nigeria, DFID declined to fund in-country work, and co-funding could not be found until 1998 (Leventis Foundation), and only on a scale calling for major cuts in research plans. Earlier work, whose findings are drawn on in the Kano-Maradi study (Mortimore and Adams, 1999), had come to a stop with a workshop held in Kano in 1997, when DFID removed Nigeria from its list of target countries for natural resources research.

26. There were 12 farmers' representatives from 3 of the 4 villages (the fourth group was unable to come); Maradi Prefecture (represented by the Secretary-General), and representatives of technical government departments, chiefs of agricultural services, NGOs, development projects, and civil society also attended. Traders were not invited, as the others were keen to attend and all places were taken up. The workshop had to be hastily rearranged from its mid-April date because of a presidential visit to the area.

second participatory workshop held there (and for the officials and agencies, the third) since the beginning of the research. We hope that a habit of consultation has been initiated, but it must be remembered that workshops need resources. At the same time, much ground still needs to be covered, including strengthening relations between researchers and development projects and programmes. It has also to be recognised that, while some of the issues discussed can be resolved or improved at Departmental level (for example, improving the distribution of fertiliser), others require national policy changes, or the provision of additional resources.

The following evaluation was written by Dr Yamba Boubacar:<sup>27</sup>

This research has launched a social dialogue in Maradi in which the peasants have been able to express themselves without constraint. They were very pleased that the research findings were taken back to the villages and verified with them. They did not hesitate to state their positions in the presence of administrative authorities. Specific interests and constraints of rural people are only rarely taken into account, which has blocked agricultural policies from taking effect in the past. The peasants denounced the gaps and deficiencies in education, training, and information dissemination. This freedom of speech offers hope for agricultural policy, and underlines the importance of finding ways and means of improving their access to information and to an education adapted to their interests. The success of the current national poverty programme will depend to a large extent on the State's capacity to integrate these interests. In the village meetings, the peasants did not hesitate to ask about the problems encountered by rural people in the other countries studied by Drylands Research, and about the solutions they had proposed – an interest that illustrates their thirst for information. To give the peasants an optimal chance to improve their situation, it is essential to reinforce their capacities with reliable information and education that is socially integrated.

At the national level, a workshop was held in Niamey on 10 October 2002, to which a range of senior representatives were invited from research and policy institutions.<sup>28</sup> For this meeting, the relevant Working Papers were distributed, in French. The sudden calling of an Inter-Ministerial Meeting deprived the national workshop of many of its targeted participants outside the research community. As resources had been committed it was not possible to reconvene, and the meeting went ahead on the basis of a very restricted participation.

*In Nigeria*, in consideration of the powers of State-level government, and the impossibility of staging a meeting in the federal capital, Abuja, within the budget, only one workshop was planned, and was held in Kano on 25 July 2002. Initial contacts had been made to secure the participation of representatives of the traders and farmer-traders interviewed for the research, and there was a strong participation of 49 from very diverse backgrounds.<sup>29</sup> These included federal and state administrations and services, donors, NGOs, pressure groups and the press.

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27. As translated from the French by Drylands Research in its report to DFID.

28. These included INRAN, the Population and Health Department, the Livestock Department, the government's land tenure review body, the European Union, and the University of Niamey.

29. Agricultural and Rural Development Authorities (Kano, Katsina, Jigawa States); Institutes of Agricultural Research and Agricultural Extension, Zaria; Federal Livestock Authority; State ministries of agriculture; Federal Fadama Programme; International Fertilizer Development Centre; Sasakiwaka Global 2000; grain

Owing to the financial constraints, only one study received funding for fieldwork in Nigeria – a profile of food commodity marketing in Kano markets since the 1960s, financed by the Leventis Foundation, led by Dr Ariyo (Ariyo et al., 2001). Other studies were based mainly on previous research and written in the UK. Dr Ariyo first presented a summary of all the relevant Working Papers (which was available in Hausa). The findings of the food marketing study were then presented in more detail by the three researchers involved (J. A. Ariyo, B. Ahmed and J. P. Voh). After a plenary discussion, there were three working groups (two in English and one in Hausa) to discuss common issues:

- what policies to stem declining prices and enable better livelihoods?
- what policies for stabilising price fluctuations?
- what policies for income diversification?
- how to improve market efficiency?
- how to facilitate producers' access to capital, technology, and inputs?

The Chairman of the Hausa Group, Yusuf A. Abdullahi, expressed the participants' delight at being able to participate actively and at having Hausa summaries of the research reports, which they indicated they would use among their people back in the villages or markets. The down-to-earth views stemming from direct experience which they then expressed had considerable impact on the following plenary which aimed to bring together the views of the three groups, although the final agreed communiqué was more emollient. Dr Ariyo saw their contribution as the most valuable aspect of the workshop:

The Workshop brought policy-makers (at the state level) and actors in food production and marketing (farmers and traders) in the Kano region into a face-to-face contact to discuss the findings of our study. During this encounter and among the many issues discussed, the farmers and traders voiced 'new' concerns that were unrecognised or generally ignored by policy-makers. These were (1) concern about the deteriorating quality of fertilisers and agro-chemicals coming into the market; (2) an admission that access to profitable farming is rapidly disappearing in the region, due to the rapid growth in population and the need to upgrade local crafts into cottage industries as well as training/retraining of the people for such industries as a means of diversifying livelihoods; (3) the need for government to recognise and remove the high hidden cost of marketing, especially unofficial levies that are being collected daily by government officials on the roads (the police, immigration officers, vehicle inspection officers, customs officers, traffic wardens, officers of the National Drug Law Enforcement Authority, officers of the Federal Road Safety Corps, officers of local councils) as a way of reducing the large differential between farm-gate and retail/consumer prices of food commodities; (4) farmers also bemoaned their lack of access to institutional credits and debunked the popular notion that they view such credits as easy money that they are prone to handle irresponsibly. They called for a thorough study of integrating traditional institutions into institutional lending mechanisms as a way of improving the loan recovery process.

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and livestock traders; farmer-traders from the villages; the press; Women in Nigeria (an NGO); producers' associations; the Cross-Border Trade Research Network; Ahmadu Bello and Bayero Universities.

Participation in the workshop was very lively, although it was restricted to the state level and lasted for only one day due to the limited funds available. The major impact of the workshop in our view is that it has generated awareness, among state officials who attended, of the foregoing concerns of both the farmers and traders in the region. The policy implications of these issues require the collaborative efforts of all tiers of government in the land to work out. It is necessary, therefore, to expose higher-level policy-makers to these and other findings of the study in order to carry the awareness forward and influence future policies (J.A. Ariyo, email to Drylands Research, 2002).

This case illustrates the importance of:

- circumstantial and unpredictable events, such as changes in donor policy, in governments, or in access to policy-makers, which can interrupt continuity in action-research or bring it to a premature termination;
- admitting that much remains to be done to bring together the agendas of local communities and stakeholders with those of central government, using appropriate platforms and local languages;
- constructing policies for dryland development from local consultations that include farmers and traders.

## 6 Lessons learnt

Comparison of the long-term impact of differing policy regimes shows that the state, and the donor community behind it, may have a determinative role in enabling smallholders to achieve their potential. Empowerment and opportunity were two themes highlighted in the *World Development Report, 2000* (World Bank, 2000). Critiques of policies, and of their impact, over 40 years show that the evidence base was often weak, and that the influence of ruling paradigms, as opposed to the needs perceived by national bureaucrats (or even less, by the intended beneficiaries), was at times excessive.<sup>30</sup> The knowledge base for policy-makers is still deficient, and translating knowledge into policy process is little understood, but we now list some of the general lessons learnt from this exercise.

### 6.1 Targeting

We have distinguished four levels – international, national, sectoral and sub-national and two modes. For example, grazing land management on small farms in Kenya, if suggestions for improvement are communicated to professionals and farmers by agricultural newsletters emanating at the sectoral level, may be given more informed attention at the sub-national level. Such a strategy is in a *bureaucratic mode*. Other issues require the participation of democratic institutions across more than one level, a slower and more complex process – for example, reforming state interventions for agricultural input delivery in Nigeria, Niger and Senegal. Major changes in policy are

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30. As acknowledged by some opinions within the World Bank, in regard to its Kenya agricultural programmes (World Bank, 1998).

only likely to occur after wider debate, possibly also involving pressures from donors (level 1), and civil society (level 4). This is a *political mode*.<sup>31</sup>

## 6.2 Taking research forward at an international level

Workshops, websites and publications can insert findings into international debate (Drylands Research, 2001). A book (which lasts longer than a website and is more portable) can be used in teaching both agency and national staff (as occurs with Tiffen et al., 1994).<sup>32</sup> Its influence can to some extent be tracked through citations.

Very recent developments in international agencies concerned with dryland development policy indicate a dramatic paradigm shift from environmental degradation and control scenarios towards people-centred development strategies. In place of programmes to promote improved natural resource management, at costs ultimately found to be beyond the means of poor people themselves, which were typical until the 1990s, a new perspective aims to understand the relationship between environment and livelihoods, and the productive potentials of dryland peoples. In place of project support, UNDP is advocating a programmatic approach, supported by adequate policy and legislative reform (UNDP, 2003), as spelt out in its new *Challenge Papers*. The Global Mechanism (GM) of the UN Convention to Combat Desertification (UNCCD) commissioned a study of 'success stories' in dryland development, which includes two of the districts (in Kenya and Nigeria) documented in this article (Reij and Steeds, 2003).<sup>33</sup> A study commissioned by the FAO's Investment Centre (with IFAD) on indirect (including policy) incentives for investment, sets out guidelines for investment-enabling policies, which as this study has shown, has relevance for dryland policy (Knowler, 1999). An *ad hoc* group of researchers, professionals and agency representatives prepared a draft policy brief for the sixth meeting of the Conference of Parties to the UNCCD, which identifies key action points for a new policy framework (Anderson et al., 2003). The work reported in this article is consistent with these new thrusts. It is easier to recognise such a strategic shift in thinking than it is to attribute it to the influence of a particular research project.

Aside from specifically dryland initiatives, parallel policy processes, in particular the design of Poverty Reduction Strategies, are in train at national level but under international donor guidance, in many countries. They present a complex challenge for a bottom-up approach such as the one developed in this study. It is desirable, but not easy, to find *ways of linking independent research* into such donor-driven initiatives.

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31. In Kenya, the Soil and Water Division has long been the best resourced part of the Ministry of Agriculture, owing to donor support. A shift of resources into regenerating grazing land could be accommodated bureaucratically within the Division, but a switch in favour of veterinary services would involve a different department and a political decision, with both donor and civil society interests participating. The strength of civil society organisations is critical; in Kenya, tea and coffee farmers are better organised than those producing grain and livestock.

32. It has not yet proved possible to attract funding for writing a book to synthesise findings from the new research.

33. A GM Review Meeting called to discuss this report agreed that an urgent need exists to document more 'success stories'.

### 6.3 National differences

Each country configures its *democratic, policy-making and civil society institutions* differently, and research-policy dialogue needs to be tailor-made. Powers to effect change through sub-national administrative units depend on constitutional provisions and revenues. There are significant differences between anglophone and francophone countries, and in the architecture of political pressure from donors, elites, and other interests. Scale is also relevant, and geographical or cultural distance from the centre. For example, Diourbel is a department in a centralised state, small in demographic terms, whereas Kano is a strong State in a very large federation. As it enjoys an elected assembly, in theory it should be possible for rural people to influence policy through political representation. The organisations that constitute civil society range from the local to the nationally confederated, and vary in their linkages to the political centre. For example, the Mouride brotherhood in Senegal, the churches in Kenya, and the grain and livestock traders of Nigeria differ in many respects. Few countries have an equivalent to Senegal's CNCR.

### 6.4 National ownership

Engagement with a policy-making process must therefore be led by senior and experienced national researchers, and make use of their knowledge and institutions, and their contacts and networks. *National 'ownership' of research findings, and the resultant research-policy dialogue*, do not begin with a transfer of findings at the end of the project, but should ideally begin with the research design and continue through its execution and follow-up. In this case, there was a continuing relationship between Drylands Research (the co-ordinating partner), in-country researchers (mostly employed in national partner institutions), district and local-level administrators and professional departments or agencies, and collaborating families in the sampled villages, through to the endorsement exercise. This has now ended, except to the degree that the national researchers wish, or have resources, to carry it forward.<sup>34</sup> However, what was lacking in the initial dialogues was contact with, or the involvement of, national ministries as opposed to research institutions, and this is a partial explanation of their low level of participation in the final workshops in Senegal and Niger. There is a problem here, in that limited resources of finance and time at this stage have to be concentrated on team building and getting the research off to a good start, rather than with networking at the relevant ministries. There is a possible role here, which we did not exploit, for the local branch of the commissioning agency, or the embassy, to suggest and promote contacts.

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34. The degree of involvement in design and in the endorsement exercises varied by country. National influence on design was higher in Niger and Nigeria, due to funding having been available from the Club du Sahel for visits before the proposal was written. In Senegal, the proposal was written after only brief consultation, during a visit to Senegal for other purposes, but both co-ordinators visited the UK before field work began, the team was largely picked by them, and the inception workshop was very thoroughly prepared by them.

### 6.5 *Placing findings in policy context*

A coincidence between the research findings and *policy matters currently occupying political and public attention* is very helpful, as the Senegal experience illustrates. However, if such a coincidence is lacking, it cannot be engineered. The participation of national policy-makers in the research design, although perhaps ideal, is unlikely always to be practicable, especially if the research questions received opinion that is already expressed in policy. Managing such counter-orthodox outcomes – especially if additional validation is thought to be necessary before accepting them – is not straightforward. This research, as we have noted, does challenge some received opinion on dryland management. It is also possible that research findings can have unpredicted relevance for departments not involved at all in its planning. For example, this research found relevance to educational policies.<sup>35</sup>

### 6.6 *Taking research forward at the national level*

New research has no automatic claim to be taken seriously by national policy-makers. The analogy is not sequential actions (research followed by policy) but *flexible interaction*. Such interaction needs resources, as dialogue throws up new questions, as well as taking time, calling for commitment by researchers to the policy process. Who should decide what research findings justify such investment, and what do not? One party to the dialogue is the policy-makers, who have their own agendas and pressures to cope with. The other party is the national research leaders and their colleagues. They too have other priorities, including a need for, or interest in, pursuing other research and livelihood opportunities. The long gap between the completion of in-country research in 2000 and the endorsement and dissemination exercises in 2001-2 meant that some of our researchers had become otherwise involved. It would be ideal if endorsement, dissemination and research-policy dialogue could be provided for in a research proposal. However, there are practical difficulties in seeing so far ahead, when the research findings, and therefore appropriate modes of follow-up, are unknown.

### 6.7 *Validation and participation, at sub-national level*

*The validity of research findings is important.* If they are based on local research, the synthesis derived from them needs to be taken back and endorsed at the appropriate level. Without this endorsement, the researchers may not have the confidence to promote the results, particularly if they question received opinion. Village people and researchers can (and should) converge on research findings, and on the public action that is desirable to take forward agreed priorities, because village people naturally accept a long-term view. This is very different from a traditional expectation that village people should accept expert diagnoses without question. Participatory policy discussions at local level have a strongly positive reception among people accustomed in the past to authoritarian, one-way government. *Empowering such discussions on an 'evidence-led' basis* is both a worthy and a worthwhile activity for researchers. Much

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35. DFID has important educational programmes, but its Education Advisors were not involved in the initiation of this research.

still needs to be done to incorporate evidence into empowerment. Demand for information, new knowledge, and opportunities is buoyant at local level. Participation, of course, raises expectations – or creates perceived entitlements. In some of our collaborating villages, researchers have already come under pressure to deliver some form of follow-up.

Local people can only endorse and debate research findings effectively with officials and researchers in a *language with which they are thoroughly familiar*. They may bring up new and important issues which outsiders have not hitherto considered. Insights can emerge from an exchange of views unimpeded by a need to express them in an unfamiliar medium. In order that they do this, the *ratio of participating officials to local people* also needs to be considered. Four local people versus 40 officials does not work; 16 versus 30 does. It was also helpful that local people had time to consider the findings and their implications in meetings at village level, before meeting with officials at district level. They came with considered views, secure in their knowledge of the village consensus.

However, *this activity takes time and resources*, and requires careful consideration of language and literacy issues.<sup>36</sup> It can be particularly important if stereotypes of rural people by professionals reflect inaccurate or patronising perceptions, or low expectations. The promotion of a more participatory or empowering approach in areas such as extension or the management of common resources can only work if local agents of sectoral ministries are convinced of the abilities of local people, while taking realistic account of their constraints.

*Involving local pressure groups* can be important in the political mode, or their exclusion destructive. It is important not to omit traders, who by the nature of their work link urban and rural, supply and demand, and interact and overlap with both farmers and officials. This is particularly relevant, now that development policy has become more market-oriented. In our work, we did not involve them explicitly at the district mid-term workshops, or in the endorsement workshops in Senegal and Niger, but the Nigerian endorsement workshop showed how valuable their input can be.

### 6.8 Institutionalising participation

Institutions are accorded a high profile in current development policy debate. In our long-term studies and in the participatory endorsement exercise, however, no clear agenda for changing institutions emerged. The long-term trends identified in each country have mostly taken place within a given institutional framework, or through autonomous adaptations (for example, in customary resource tenure and family institutions), which suggests that interventions should only be undertaken with great care. However, experience in the endorsement exercise shows that the *participatory policy process* itself should be ‘institutionalised’, not necessarily through new structures

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36. The language issue has many facets. Written Hausa in Nigeria can be produced with a normal keyboard, and is widely understood, with its own literature, newspapers, etc. Hence, farmers and traders at the workshop were glad to have Hausa documents to take back to their home areas. The French transliteration of Hausa can only be produced on specially modified typewriters, and is difficult to transmit by email (Yamba Boubacar). Very few people are literate in it, though some Niger migrants to Nigeria have picked up literacy in the Nigerian Hausa orthography.



but by building guarantees of empowerment and participation into existing (and well understood) power relations.

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