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A Poverty and Social Impact Analysis of Three Reforms in Zambia: Land, Fertilizer, and Infrastructure

Steen Lau Jorgensen and Zlatina Loudjeva

POVERTY AND SOCIAL IMPACT ANALYSIS (PSIA)



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Table of Contents

Acknowledgements.....	i
Acronyms.....	ii
Executive Summary.....	iv
1. Introduction.....	1
1.1 Objectives of the paper.....	2
2. Setting the Stage: Country Context and Poverty.....	4
2.1 Country context.....	4
2.2 Poverty in Zambia: Causes, correlations, benchmarks.....	6
3. Land Reform.....	9
3.1 Land in Zambia: Past and present.....	9
3.2 The legal framework.....	10
3.3 Land: Problems of distribution and access.....	12
3.4 Perspectives on the sources of existing problems.....	13
3.5 Problems: Insecurity, under-use, inequity.....	13
3.6 The Draft Land Policy.....	15
3.7 Poverty and Social Impact Analysis (PSIA) of the Draft Land Policy.....	17
3.8 Land: Policy options for the future.....	30
3.9 Land reform: Conclusions.....	33
4. Fertilizer.....	35
4.1 Recent history: Liberalization and impacts.....	36
4.2 Current policy.....	37
4.3 Impact of the programs.....	39
4.4 Fertilizers: Policy options for the future.....	44
4.5 Fertilizers: Conclusions.....	45
5. Rural Roads.....	46
5.1 Background.....	47
5.2 Policy framework.....	47
5.3 Provision in practice.....	48
5.4 Financing and comparative costs.....	49
5.5 Impact of community-based programs.....	50
5.6 Rural roads: Policy options and conclusions.....	51
6. Conclusion: Agriculture-led Poverty Reduction?.....	53
6.1 The way forward.....	55
Annex 1: Structure of the Agricultural Sector.....	57
Annex 2: Methodology – PSIA Specific Research.....	60

Annex 3: Stakeholder Analysis of Land Reform	69
Annex 4: Additional Data on Land and Poverty	82
Bibliography	84

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Acronyms

AFC	Agricultural Consultative Forum
CAS	Country Assistance Strategy
CBO	Community-based Organisation
CEM	Country Economic Memorandum
CF	Conservation Farming
CFU	Conservation Farming Unit
CHH	Child Headed Households
CLUSA	Cooperatives League of the United States of America
CSO	Central Statistics Office
CSO	Civil Society Organizations
CSPR	Civil Society for Poverty Reduction
CT	Conservation Tillage
DAC	District Agricultural Committees
DFID	Department for International Development
FAO	Food and Agricultural Organization
FHH	Female-headed Households
GART	Golden valley Agricultural Research Trust
GRZ	Government of the Republic of Zambia
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH
HIV/AIDS	Human Immuno-Deficiency Syndrome/Acquired Immunity Deficiency Syndrome
HIPC	Heavily Indebted Poor Countries
IDS	Institute for Development Studies
IFI	International Financial Institutions
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
JCTR	Jesuit Centre for Theological Reflection
JPC	Joint Permanent Commission
LFSP	Livingstone Food Security Project
LP	Linear Programming
MACO-FSP	Ministry of Agriculture and Cooperatives Fertilizer Support Programme
MCDSS-FSP	Ministry of Community Development and Social Services Food Security Pack
MISA	Media Institute of Southern Africa
MP	Member of Parliament
MPU	Micro-Projects Unit
MS-Zambia	Mellemfolkeligt Samvirke (Danish Association for International Cooperation)- Zambia
NAPSFF	National Association for Peasant and Small-scale Farmers
NCZ	Nitrogen Chemicals of Zambia
NGO	Non-governmental Organization
PAG	Participatory Assessment Group
PAM	Program Against Malnutrition
PAZA	Press Association of Zambia
PELAM	Participatory Ecological Land Use Management (Association)
PPA	Participatory Poverty Assessment

PPM	Participatory Poverty Monitoring
PPR	Participatory Poverty Research
PRSP	Poverty Reduction Strategy Paper
PSIA	Poverty and Impact Social Analysis
PUSH	Program of Urban Self-Help
ROADSIP	Road Sector Investment Program
SGS	Societe Generale de Surveillance
TAL	Technical Assistance Loan
TVE	Township and Village Enterprises
USAID	United States Agency for International Development
WDR	World Development Report
WFC	Women for Change
ZAMSIF	Zambia Social Investment Fund
ZAMWA	Zambia Media Women Association
ZANA	Zambia News Agency
ZARD	Zambia Association for Research and Development
ZAW	Zambia Alliance of Women
ZIMA	Zambia Independent Media Association
ZIS	Zambia Information Services
ZNBC	Zambia National Broadcasting Corporation
ZNFU	Zambian National Farmers' Union
ZSC	Zambia Sugar Company

Executive Summary

1. This paper reviews the findings from a poverty and social impact analysis (PSIA) of three reforms in Zambia: land, fertilizer subsidies and rural roads. It explains how the PSIA approach was applied to these reforms and makes suggestions about policy design. This PSIA was done as part of the World Bank's Country Economic Memorandum (CEM) for Zambia, in an attempt to tighten the pro-poor focus of the Bank's Country Assistance Strategy (CAS) for the country.

2. Data for this paper was gathered through a literature review, surveys, and interviews with stakeholders and informants. It also draws on a participatory poverty research (PPR) done in ten communities, an update of a 25-year longitudinal anthropological study of a village in Eastern province, and a Fertilizer Roadmap study. The data were gathered and most analysis was done between October 2002 and February 2003, and then updated with stakeholder feedback and new data in 2003. The analysis also references an updated rural-household model fashioned for Zambia. Stakeholders were actively involved in the analysis of data and the formulation of policy recommendations based on it.

3. The study was based on the premise that: i) reform is a process, not an edict nor a document; ii) implementation is as important as policy design in a reform's impact; iii) unintended consequences are not always unknowable; and iv) where uncertainty exists, analysis of problems actually occurring is most important to consider. The PSIA looks for the constraints to poverty reduction and for ways to remove them.

4. Zambia's poverty reduction strategy paper (PRSP) sets great stock in reducing poverty by increasing agricultural productivity. Given the importance of agriculture to Zambia's people, most of whom live in poverty, the PSIA attempts to inform the following two key questions:

- i) What is smallholder agriculture's potential for reducing poverty?
- ii) Are agricultural reforms the best use of Zambia's scarce capacity and resources?

Land reform

5. The government's land-reform proposal, laid out in the Draft Land Policy, seeks to improve both use of and access to land. It centers around transferring control of much of Zambia's land from the traditional tenure systems to state title. In theory, titled land is more secure and can be used as collateral; land security and collateral will encourage farmers to invest in land and increase agricultural productivity. The policy also proposes improving the dispute-resolution mechanism and tax and fee collection. The reform proposal attributes existing inequities, especially in gender, to the discretionary rule of customary leaders under the traditional tenure system. The government proposes to improve land access for women and vulnerable groups by reserving 30% of the land for them. This is meant as a poverty-reduction mechanism.

6. The PSIA finds that most Zambians do not identify land as their binding constraint. They lack complementary inputs, such as fertilizer, infrastructure, agricultural technology and extension services, for the land that they already have. Giving rural farmers more land or titling the land that they already have will do little if they still lack other inputs.

7. Many respondents did mention the chiefs' power to arbitrarily reduce or eliminate one's lands, but they also mentioned the provision for state re-entry in titled lands and the persistence of problems and low capacity in the Ministry of Lands. Such doubts weaken the argument that titled land is more secure. That traditional lands cannot be put up for collateral also means that they cannot be foreclosed upon in the event of a bad harvest or other catastrophe. Traditional lands thus act as a sort of safety net. Finally, studies in Zambia and elsewhere have shown that usufruct rights, when well defined and stable, need not deter investment; nor is title a sufficient condition for investment.

8. Land has little value if there is no demand for it. Land in remote areas is poor collateral. Thus the same lack of infrastructure that keeps productivity low limits the potential for titling to raise productivity. In most parts of the country, no institutions exist to make large loans; title, by itself, does little good in such places. Most respondents mentioned that they can receive small loans without collateral, and that group loans were more popular for larger projects.

9. If people are going to use land for collateral, then Zambia's many inheritance structures need to be examined. The HIV/AIDS pandemic makes the death of one or several loan signatories during the payment period a real risk. Financial institutions have no guarantee that whoever inherits the land also inherits the loan. Women have few or no inheritance rights under traditional tenure.

10. In respect to vulnerable groups, the Draft Land Policy is vague. Despite the 30% figure, it defines neither "vulnerable groups" nor implementation mechanisms. The policy conflicts with many traditional tenure systems, and the government does not have the capacity to enforce reallocation. There is a real risk that "30%" will mean 30% of the 6% of Zambia's land already under state ownership. Even this would be difficult to implement or monitor, since the land registry is outdated.

11. Some of Zambia's land has been administered by group entities. Experience in other countries also shows that where such administration is transparent and representative, it costs far less than individual titling.

12. Commercial farmers have called for changes in how rents are assessed, to take into account things like the rainfall a land receives and its access to infrastructure. Such changes would most likely lead to better use of land. This may, however, increase (and possibly influence) inequality since it will force already-poor people onto lower-quality but more affordable land, while allowing already-wealthy people to work the best land.

13. Access to cash is strapped throughout rural Zambia. There is no guarantee that poorer households could afford the costs of title deeds or the rents on titled lands. Improved fee and tax collection is only possible when there is money to be collected. An attempt to improve tax and rent revenues would most likely harm the poorest farmers who largely operate outside the cash economy.

14. As for implementation capacity, most state institutions do not have power below the district level. Traditional authorities handle most of the day-to-day administration and public welfare. The power to allocate land and judge disputes is the foundation of traditional authority. Transferring land to state control will remove this foundation and erect little in its place. The reform could thus spawn serious social discord. Evidence from Eastern province shows the detrimental effects of diminishing one form of authority without replacing it with any other form.

15. A stronger, faster dispute-resolution mechanism is needed. Disputed land is insecure and unproductive. Currently, dispute resolution can take years and cost more than the land is worth. Moreover, the dispute-resolution system is still dominated by men and accessible only to those who can afford it. The weaknesses of the decade-old Land Tribunal and the slow courts raises the question of whether it makes sense to enact a sweeping, controversial, and contentious land reform when the dispute-resolution system is in such poor shape.

PSIA recommendations for land reform

16. Institutional capacity is a prerequisite for large-scale reform, including:

- Accessible, affordable and well-functioning dispute-resolution systems
- Extended and improved reach of the Ministry of Lands
- Transparent and accessible means to disseminate information about land availability, prices and quality
- Recognition of traditional, communal land rights while improving transparency and representation in those bodies.

17. Before or while building such capacity, complementary reforms are needed, including:

- Improved road network, especially in remote areas
- Greater access to cheaper fertilizer
- Functioning agricultural extension service.

18. A “blend” of reforms could be considered, such as recognizing the administrative role of traditional authorities (while working to eliminate the biases and exclusion of vulnerable groups therein) alongside long-term, transferable leases. Occupancy rights can be recognized, and records of such occupancy need to be constructed at the local level.

Fertilizer subsidies

19. Since the Government of the Republic of Zambia (GRZ) drastically reduced its fertilizer subsidies in the early 1990s, fertilizer prices have increased while availability has declined. Multiple studies have recorded farmers’ complaints about how fertilizer is not available on credit and is often completely unavailable, even to those who have cash. This affects both cash and food crops: the production of hybrid maize, which requires fertilizers, plummeted during the 1990s. Expensive or unavailable fertilizer thus poses a threat not just to agricultural productivity and economic growth but also to basic food security.

20. Debate over the shape of fertilizer reform has been between those who favor increasing the public sector’s involvement in producing and distributing fertilizer, especially to remote areas where private traders have little incentive to sell; and those who argue that further privatization coupled with infrastructure investments in remote areas will solve the same problems at lower cost. The PSIA examined the government’s two current distribution schemes: the Food Security Pack Program and the 50% subsidy scheme for hybrid maize production.

21. Both programs have had difficulties delivering their products on time and on the scale promised. One outstanding concern is whether women benefit from these schemes as intended. Women, having less cash, find it hard to buy even subsidized fertilizer. Despite these setbacks, both programs have spurred the development of community-based organizations, and the 50% scheme in particular has breathed some new life into Zambia's cooperative societies.

22. Private-sector respondents complain about the market distortions that these schemes cause, but tend to agree that, under current conditions of poor infrastructure and pockets of extreme poverty, the private sector is unlikely to fill the gap that would be left if the state were to end these programs. The gap would be worst in the remote areas, hurting some of the poorest of the poor.

23. One of the greatest determinants of the price of fertilizer is the high transportation costs over Zambia's crumbling roads. Remoteness also keeps many poor farmers out of the cash economy. Infrastructure improvements would thus help to reduce both of these problems simultaneously.

PSIA recommendations for fertilizer subsidies

24. The PSIA sets out the following recommendations for fertilizer subsidies:

- Provide a clear, written policy for state interventions in the fertilizer market
- Promote increased competition in the fertilizer markets
- Encourage the out-grower schemes that private companies have pioneered
- Improve the targeting of the Food Security Pack and 50% subsidy schemes, with an emphasis on reaching women
- Increase communities' bargaining power by building capacity for sharing information and negotiating bulk purchases
- Invest in research and extension services, and disseminate knowledge about farming practices that use less or no fertilizer.

Rural roads

25. Zambia needs better roads. Zambia's poor rural-road network is a culprit in lower agricultural productivity, unaffordable and unreliable fertilizer supplies, poor health, moribund markets and more. The PRSP recognizes this. The GRZ and donors have collaborated on ROADSIP, an integrated program to extend and repair rural roads. The program shifts responsibility for roads from four government ministries to three public agencies, each with a clear mandate and accountability, and emphasizes community/government partnerships in road construction and maintenance.

26. ROADSIP has had some successes, especially where non-governmental organizations (NGOs) and donors have contributed expertise and resources. The program's commitment to women's participation (half the members of the various community committees must be women) is laudable. The program's weaknesses, where they arise, stem mostly from three sources. First, an NGO or donor can dominate a project, leaving the community unable to take over operations or maintenance later. Second, the responsibilities of various parties for operation and maintenance may be too vague. Third, coordination between road projects in different communities is often poor.

27. The social impacts of ROADSIP have generally been positive, though not massive. Improved local roads tend to improve local welfare and incomes. These projects can encourage a sense of ownership among the involved communities and strengthen social capital. Furthermore, the push for transparency in decision-making and the commitment to gender inclusion in these projects can have positive spillovers.

28. In looking forward, however, the PSIA cautions against devoting too many resources to restructuring government agencies. Such shuffling will do little good if unaccompanied by incentives for communities, local governments and the private sector to contribute to road maintenance.

PSIA recommendations for rural roads

29. Implementation is key. The government and its collaborators in ROADSIP seem to be on the right track. The risk at this point is that, due to lack of resources or consistent commitment, support for these projects will wither. Zambia has had a wealth of reforms that did not achieve much; this reform, which underpins so many others, should be buttressed wherever possible.

Conclusions: Agriculture-led poverty reduction?

30. The conclusions of this report do not sustain the PRSP's faith in smallholder agriculture's potential to reduce poverty, especially in the short term. Land reform, by itself, will do little to increase agricultural productivity. Productivity suffers from the lack of fertilizers, which in turn are hampered by the inadequate road network. There are also many additional constraints identified by the research, such as poor irrigation, depots, etc, though these go beyond the scope and focus of this paper.

31. Any land reform should focus on improving the existing state institutions and the management of existing state land before extending their reach. Any attempts at titling could first be piloted in those parts of the country where the land is fertile, the fertilizer available, the markets nearby and the roads smooth. If this goes well, then expansion could be considered, remembering that there will be new problems in less congenial regions.

32. The fertilizer market could be more congenial to the private sector if the government commits itself to a clear plan for its interventions in the market. Clear operating rules, combined with better infrastructure, could increase private-sector participation. Ultimately, if prices fall and technology improves, fertilizer subsidies can be phased out. In the meantime, the targeting of these schemes, especially toward women, can be improved.

33. The missing pieces of the rural roads program are clarity on responsibilities, legal explanation of ownership of various projects and better coordination among projects. Infrastructure improvement should be unflaggingly supported, since infrastructure underlies so many other problems.

34. Many of Zambia's poor farmers are trapped in a low-level equilibrium. They allocate much of their land to basic foodstuffs because they are food-insecure. They cultivate these crops with simple technology and few complementary inputs, and they sell their surplus at low prices to those traders who brave the poor roads to come to them. Devoting land to basic food security reduces the potential for commercial farming, which means the farmer earns less money, which means less cash to pay for fertilizers and other inputs that would allow the farmer to break out of this cycle.

35. Market and trade liberalization in Zambia was carried out in the absence of a strong private sector. The gap left by the collapse of the public sector has helped create the vicious circle described above. Ultimately, a flourishing private sector, peopled by productive, prosperous farmers, is in Zambia's best interest. To get there from here, though, requires strengthening the physical and social institutions—including the roads, the courts, the land registries, communities, and the agricultural input supply and marketing networks—on which such prosperity will rest.

1. Introduction

1. Two decades ago, Zambia was one of the most prosperous countries in Sub-Saharan Africa. Today, 73% of the population lives in poverty and over 70% is food-insecure. The Government of the Republic of Zambia (GRZ) has pursued an adjustment program since 1991, but the structure of the copper-dependent economy has changed little, growth has been elusive and the number of poor people has increased.¹ Changes to agriculture were a main part of the reform package.² Despite these reforms' intent, the number of poor rural dwellers has increased.³

2. In 2002, Zambia produced its first Poverty Reduction Strategy Paper (PRSP). The World Bank planned to address the PRSP's priorities with a new Country Assistance Strategy (CAS). This Poverty and Social Impact Analysis (PSIA)⁴ of key reforms was done as part of the Country Economic Memorandum (CEM), to strengthen the pro-poor focus of the CAS.

3. With so many reforms listed in the PRSP, it was difficult to decide where to start. Following the maxim, "when lost, ask," the team reviewed the existing data and consulted a range of government officials, civil society and private sector representatives and donors. As a result of these consultations, the PSIA ultimately focused on the poverty and social impacts on rural dwellers of three reforms: land, fertilizer subsidies and rural roads. Of all the reforms, these three were the most urgent (fertilizer subsidy and infrastructure) or the most controversial (land and fertilizer) in the opinion of the groups and individuals consulted. Furthermore, stakeholders recognized the links among the problems that these reforms are meant to solve- i.e. boosting agriculture-led development and reducing poverty. The Participatory Poverty Research (PPR) conducted for the PSIA⁵ and further data analysis confirmed these links. The wide range of stakeholders and partners initially consulted to help select the reforms to be analyzed, were involved through the entire process of data collection⁶, analysis and formulation of policy recommendations.

4. Due to financial and time constraints, the analysis focused on rural areas. The combination of droughts and collapsing copper prices has convinced the GRZ to focus on agriculture as the major engine for growth and poverty reduction.⁷ More than 60% of the Zambian people live in rural areas, where more than 80% derive their income from agriculture and more than 83% live in poverty.

5. The PSIA team⁸ considered improving income generation through agriculture the key policy focus. Since smallholder agriculture predominates, the impacts of policy changes on smallholders were used to determine the policies' effectiveness in reducing poverty.

¹ World Bank 2002.

² Major policy shifts in the 1990s included the dismantling of state institutions for marketing and distribution of agricultural outputs and inputs, the abolition of subsidies for producers, the liberalization of trade in food items and the introduction of market-determined input and output prices (World Bank 2003a).

³ Kherallah et al 2000; World Bank 2002; World Bank 2003a.

⁴ See World Bank 2003b.

⁵ See Milimo et al 2003.

⁶ See Annex 2 on methodology.

⁷ For more details on the structure of the agricultural sector, see Annex 1.

⁸ The PSIA work was led by Steen Lau Jorgensen, Director, Social Development Department, World Bank; and supported by Zlatina Loudjeva, Social Development Department, World Bank. Valuable inputs were provided by Helen Mbaio, Social Development Specialist, World Bank, Zambia.

6. The analysis feeds into two central questions. What is the potential for agriculture-led poverty⁹ reduction, in the short, medium and long run? Are agricultural reforms the most urgent investment, given that “Many of the core weaknesses of Zambian agribusiness lie outside its own confines, in the forms of weak overall infrastructure within the country, an unstable and unpredictable exchange rate, extremely high costs of finance, and the weak capacity of government to address trade-related anomalies and problems”?¹⁰

1.1 Objectives of the paper

7. The paper explains how the PSIA approach was applied to the three reforms, each of which was at a different stage of implementation. It gives perspective to a set of issues and questions, and suggests policy choices to address them. It describes an approach for deciding on priorities and policy design. The paper presents findings from the stakeholder, institutional, impact and risk analyses, based on quantitative and qualitative data and consultations with stakeholders.

8. Mindful of serious problems with the existing quantitative data, the team used quantitative tools in combination with a review of the available qualitative data as a starting point for future qualitative research. The qualitative research then tried to test and explain the existing correlations,¹¹ within the given budget and timeframe. Three field studies were done: a PPR¹² in ten communities,¹³ building upon 10 years of systematic PPR;¹⁴ a qualitative study to update 25 years of longitudinal anthropological data in Kefa village, in Eastern province;¹⁵ and a Fertilizer Roadmap.¹⁶ The results from the qualitative work were used to inform a Zambia-specific rural-household model¹⁷ and to explain the trends observed through statistical analytical instruments.¹⁸

9. The team tried to build in-country capacity while doing the PSIA. We tried to choose tools that local researchers could use in the future. In some cases, tools were chosen so as best to update existing data so that historic trends could be observed. Details on the methodology are available in Annex 2.

10. The paper uses the land-reform analysis to introduce the PSIA approach in detail. The fertilizer-subsidy and rural-roads analyses concentrate on substance.

⁹ Poverty is defined as *unacceptable deprivation in well-being* – along a number of dimensions as presented in Zambia’s PRSP and the World Bank 2001.

¹⁰ World Bank 2003a: xiii.

¹¹ The main data-collection and analysis was done between October 2002 and February 2003. Updates were done during 2003 as feedback from stakeholders and more data became available.

¹² The PPR was done by the Participatory Assessment Group (PAG) with the participation of researchers from Civil Society Organizations (CSOs). The purpose of the combinations was to build CSO capacity to monitor and evaluate development interventions and policies. The work was coordinated by Professor John T. Milimo. See Milimo et al 2003. For more details, see Annex 2.

¹³ This was chosen to represent a mix of the 4 agro-environmental zones, closeness to and distance from roads, and different local traditions.

¹⁴ Milimo et al 2002.

¹⁵ Conducted by Else Skjonsberg and referenced as Skjonsberg 2003. For more details, see Annex 2.

¹⁶ Mwape 2003.

¹⁷ Siegel and Alwang 2004 updated the rural-household model used for the 1994 Zambia Poverty Assessment (see Alwang and Siegel 1994 and Alwang, Siegel and Jorgensen 1996).

¹⁸ The methods used included reduced form, multivariate correlation and poverty-line analysis.

11. The basic understanding of the team when approaching the analysis was that:

- *Reform is a process, from design to implementation, not a policy statement.*¹⁹
- *Implementation is as important as policy design for impacts, and it often does not follow the books. This can often be foreseen.* Implementation problems can frequently be studied and factored into decision-making in advance.²⁰
- *Unintended consequences of a policy intervention are not always unknowable.*²¹ Land reforms do not aim to create conflict, exclusion or corruption, but it has happened. This analysis shows how such impacts can be foreseen and mitigated.
- *Where uncertainties exist, analysis of actual problems occurring is essential.* If problems do not occur, everyone wins. If problems catch reformers off guard, the costs can be high.

¹⁹ See World Bank 2003c: 46.

²⁰ There is a large body of literature on the issue, from Pressman and Wildavsky 1984 to more recent work such as Brinkerhoff and Crosby 2002.

²¹ Existing literature offers excellent studies and examples. Sen 1999 is a recent one; Hayek 1967 is one of the first to introduce the concept.

2. Setting the Stage: Country Context and Poverty

2.1 Country context

12. In the past two decades, Zambia has transitioned from a prosperous middle income country to one where 73% of the population lives in poverty and over 70% is food-insecure. The per capita income has declined from \$752 in 1965 to \$351 in 2002²². The families' vulnerability is evident in the rate of stunted children²³ under five that has grown from 39% in 1991 to 53% in 1998.

13. Zambia's economic troubles in the past three decades have been caused mainly by the decline of the purchasing power of its copper resources. As copper has been the primary export commodity, the decline in international prices and the increase in oil prices in the early 1970s led to economic hardship. To avoid restructuring and to manage the short term effects, the government borrowed heavily. Continued decline of copper and borrowing turned Zambia into one of the most heavily indebted countries in Sub-Saharan Africa. During the 1990s, interest payments on foreign debt were higher than spending on human development. Recognizing the negative social impact of this debt burden in 2000, Zambia was granted debt relief under the Highly Indebted Poor Countries (HIPC) initiative. Despite the debt relief, Zambia continues to depend heavily on donors. In 2002, for example, 39.5% of central government expenditure was financed through foreign grants and loans.

14. In the late 1980s/early 1990s, in an attempt to reverse the deterioration of the economy, the Government of the Republic of Zambia (GRZ), supported by the international financial institutions (IFI), embarked on a sweeping program of deregulation and liberalization. The results have been disappointing²⁴: the structure of the copper-dependent economy has changed little, growth has been elusive and the number of poor people has increased.²⁵

15. The central role of copper made agriculture a residual sector for decades. The sector was highly subsidized with the aim of producing sufficient food grains (maize) to feed Zambia's "copper" workforce and growing populace. This attitude can be traced back to the colonial view of rural Zambia as a labor pool for the mines. After independence, during the sixties and seventies, large investments were made along the line of rail from Lusaka to the Copperbelt. Services were centralized along this line, and the rest of Zambia kept at a very low level of development. This resulted in significant migration: close to 40% of the population lives along the "line of rail" and almost 60% lives in the cities. This copper-led rapid urbanization has made coping with consecutive shocks more difficult as it has destroyed significant social capital and agricultural skills.

16. The steady copper decline made agricultural development the only foreseeable alternative for economic growth and poverty reduction. Changes to agriculture were a main part of the reform package introduced in the 1990s. Major policy shifts included the dismantling of state institutions for marketing and distribution of agricultural outputs and inputs, the abolition of subsidies for producers, the

²² World Bank 2004.

²³ Stunting (low height for age) measures the cumulative effect of a number of shocks. Other malnutrition rates (weight for age and especially wasting (weight for height) measure more short-term negative impacts on children. Periods of low height growth tend never to be recuperated, making stunting a good measure of the cumulative effect of inability to manage shocks.

²⁴ The literature offers different (and often contested) reasons for the development of reforms. This discussion is beyond the focus of this paper.

²⁵ World Bank 2002.

liberalization of trade in food items and the introduction of market-determined input and output prices²⁶. Despite these reforms' intent, the number of poor rural dwellers has increased²⁷ and the structure of the agricultural sector has not changed much. Most of Zambia's agricultural producers are smallholders, who use simple technologies and cultivation practices.²⁸ These smallholders mainly grow rain-fed maize, groundnuts, roots and tubers, primarily for own consumption, on mostly fewer than two hectares of cultivated, rain-fed land.²⁹

17. Overall, poverty in rural areas has increased significantly during the 1990s. Just between 1996-98, poverty levels among medium scale farmers increased from 65.1% to 71.9%. Meanwhile, the poverty levels among small-scale farmers persisted as high as about 84%. The only drop in poverty numbers during the period is recorded among large scale farmers: from 34.9% to 15.6%.³⁰

Table 1: Vulnerable households

Proxies of vulnerability	1991	1996	1998
<i>Percentage of households who engaged in the following coping strategies:</i>			
Received relief food		6	7
Ate wild foods only		10	18
Substituted ordinary meals with less nutritious meals		40	51
Reduced food intake		46	64
Stunted children	39	46	53

Source: CSO 1993, 1996, 1998; CSO and MOH 1996; UNICEF 1999, 2001.

18. The agricultural sector has started to slowly improve recently but indicators of rural well-being remain grim. In Zambia, rural households spend nearly three-quarters of their budget on food, and a high percentage of this is for in-kind home consumption. Indicators of rural empowerment remain low, for example, in 1998 only 30% of agricultural households received any information about agricultural prices, and half of these received the information from other farmers.³¹

19. Despite experiencing moderate economic growth, Zambia has been suffering from deteriorating human development indicators. Good human development indicators are usually resilient to short term economic shocks, and improve even when economic growth is low, but not in Zambia. Life expectancy has fallen dramatically, mortality and morbidity have risen³². The under 5 mortality continues to rise, reaching 162 deaths/1000 live births by the end of the 1990s, well above levels recorded two decades ago. As many as one-quarter of all children born to the very poor and other vulnerable groups do not live past their fifth birthday. Child mortality in some of the poorer and isolated provinces averages well over 200 deaths/1000 live births.

²⁶ World Bank 2003a.

²⁷ Kherallah *et al.* 2000; World Bank 2002; World Bank 2003a.

²⁸ There are only a small number of commercial farms that produce cash crops for export.

²⁹ It is estimated that only 40% of smallholders actually sold crops during the 1999-2000 season. See World bank 2003a.

³⁰ MAFF 2001:16

³¹ CSO 2000.

³² The Demographic and Health Survey (CSO and MOH 1996) and 2000 Population Census (CSO 2001) report somewhat different mortality rates, including a difference in trends for the IMR. Both sources are included here; our preference, based on sample size, is to use the census figures.

20. The economic decline is not solely accountable for the decline in human development indicators. The extent of HIV/AIDS prevalence, combined with the growing ex post impacts (e.g. many AIDS orphans, displaced children) and repeated exogenous shocks (i.e. droughts, external price shocks) combine to make people poor and highly vulnerable. Malnutrition itself is a contributing factor to higher morbidity and mortality and remains high throughout the country. Boys and girls are equally likely to be malnourished. However, stunting (low height-for-age) and wasting (low weight-for-height) is higher in rural areas, consonant with difference in overall levels of income poverty and morbidity and mortality.

21. In this context, the government elected in 2001 brought new optimism: a major effort has been made to limit corruption and diversification of the economy is being pursued. The first full PRSP in 2002 has outlined an ambitious plan to improve the socio-economic situation of the Zambian people, especially those living in rural areas and facing a greater poverty gap, greater insecurity and less control over their own lives.

2.2 Poverty in Zambia: Causes, correlations, benchmarks

22. As they have been for decades, the main determinants of poverty are physical isolation and low levels of physical and social assets, notably land and human capital. Existing work, including the 1994 Poverty Assessment, has made a strong case for investments in labor-saving technology and rural infrastructure. We used 1998 household survey data to rerun a 1991 reduced-form model of rural household expenditures, to test if the correlates with poverty have changed, and thus to see whether these recommendations were still valid. The results show that the correlates with expenditure per adult-equivalent are still i) head of household not in agriculture (i.e., in non-farm employment); ii) distance to markets (a 1% increase in distance leads to a 4% increase in expenditure; iii) access to information,³³ iv) education of the household head (post-primary education makes a big difference) and v) availability of labor and labor-saving technologies.³⁴

23. The PPRs done during the years confirm that labor is a major constraint. For example, “malaria is more of a problem during the rainy season as able bodied men and women spend time at home or at the clinic sick instead of cultivating their fields.”³⁵ Sickness means not only time away from the fields but also costs for medication and the productive time of those nursing the sick. Asked about the main constraints on agricultural development, respondents rank illness with access to fertilizer and markets as the strongest ones. The absence of farm power (e.g., tractors and animals) comes next on their lists.

24. The rural-household model illustrates that allocating more land to smallholders without addressing labor constraints will have no real impact on production or poverty. Under existing technologies and constraints, typical households (using household labor) cannot cultivate more than 3.5 hectares (ha).³⁶ With such levels of cultivation, incomes from agriculture are less than \$0.50 per person per day. Allocating more land will lead to under-use, unless labor markets are created (although the

³³ Approximated by radio ownership, which could also be seen as a proxy for physical household assets.

³⁴ Age of household head is a quadratic relationship, where the maximum occurs in middle age. This is also indicated by the negative effect (weakly significant) of the dependency ratio (number of children and old people divided by number of working-age persons).

³⁵ Milimo et al 2003: 33.

³⁶ HIV/AIDS has increased the number of child-headed and female-headed households, which are therefore able to cultivate even less land.

demand for labor is not likely to be strong, since current conditions in agricultural labor markets suggest that few transactions take place) or labor-saving technologies are introduced.

25. The rural household model shows that remoteness leads to less land under cultivation, lower returns per household member and lower returns to land. The main reason is the focus on food security through own-production of low-value staple crops as opposed to profit-maximizing behavior and commercialization. Further evidence of skewed development patterns lie in the regional dummy variables, which show the line-of-rail provinces (Lusaka, Copperbelt and Southern) significantly better off and Western province worse off, compared to Central province.³⁷ These provincial effects capture a number of factors, but the main one is isolation. There is no significant effect on ownership of land (as opposed to usufruct) and no statistically significant effect of gender of the head of household.

26. The PPR notes the links between market access and well-being, and finds that, in all but one of the communities, market access is worse today than a decade ago. The one improvement is due to a unique partnership among commercial farmers, community members and local government. This could be a model for replication.

27. The Kefa study shows the importance of these correlates to successful farming: “As a general rule... those who want to invest in enhancing the profit from their fields will have to look for their initial capital outside the agricultural sector. The larger farmers in Kalichero area are usually men who have been able to raise money from paid employment in the modern sector.”³⁸ This is due to the lack of credit and the inability of most smallholders to generate surpluses sufficient to invest in improved technologies. The household model and analysis of agricultural budgets confirms the importance of non-agricultural incomes to poverty reduction.

28. Social assets, traditionally of great importance, have been diminishing. During the 1980s, many human development indicators did not fall as much as the economic disaster would have predicted.³⁹ Traditional risk-management strategies, such as relying on members of the extended family, marrying into wealthier families, and community cohesion under paternalistic traditional leaders, helped. There had been a strong sense that the poorest (often women and orphans) were the responsibility of the community.⁴⁰ Repeated shocks (droughts, disease) combined with price fluctuations (liberalization) and less ability to cope (loss of formal-sector employment) have increased insecurity and diminished the community’s ability to care for the needy. Inequality has increased, even as the average person has become poorer and more vulnerable.⁴¹

29. The traditional hierarchical system has been an important custodian of peace and order in these harsh times. Crime and violence have increased,⁴² but not as much as might have been expected given the sharp increase in poverty and weak presence of formal institutions. The PPR and the Kefa study show the importance of strong leadership in this regard. Modernization and education, despite their other benefits, have occasionally undermined this system.

³⁷ Northwestern province is an exception; this is likely due to more consistent rainfall.

³⁸ Skjonsberg 2003: 3.

³⁹ For instance, stunting rates remained largely unchanged despite the dramatic drop in incomes.

⁴⁰ World Bank 1994.

⁴¹ See the Gini coefficients for the past 10 years.

⁴² Milimo et al 2002; Milimo et al 2003.

30. The focus of a pro-poor strategy should be the removal of the above listed constraints. By the same logic, how pro-poor a strategy is should be decided based on its potential to reduce such constraints. It is also important to know what a reform would do to social structures that have functioned, for good or ill, for years. The starting questions of the analysis are thus: how each of the reforms addresses the issues listed above and whether the combination of these reforms helps small-scale agriculture generate enough surplus to lift families out of poverty.

3. Land Reform

31. In response to the PRSP and as a recognition of certain failures of the existing land system, the GRZ proposed a land reform that aims to address the perceived problems of inefficiency and inequity. Even if close to 80% of Zambia's arable land lies fallow, many households perceive land scarcity. Even if women participate actively in the agricultural labor and are heads of about 30% of households, they rarely own or control land. The use of land depends on the incentives and capabilities of farmers to invest in and improve land management. The Draft Land Policy attributes most of the issues to customary tenure: "The customary tenure system has severe limitations."

32. The government's land-reform proposal seeks to improve both use of and access to land through transferring control of much of Zambia's land from the traditional tenure systems to state title. The draft also suggests strengthening of the Land tribunal as a primary dispute resolution system and reserving 30% of the land for women and vulnerable groups.

33. This section firstly sets out the background and context to the proposed reform; secondly, it lays out the key components of the proposed reform; and thirdly, it analyzes the potential impacts of the reform, paying particular attention to the poverty and social impacts. The section concludes by summarizing the recommendations for the proposed reform.

3.1 Land in Zambia: Past and present

34. "The greatest resource of Zambia is her land,"⁴³ and land is almost the only physical asset that many poor farmers have. Efficient use of, and equitable access to, land in Zambia is often seen as the cornerstone of economic growth, poverty reduction and social cohesion in the country.

35. **Growth:** The PRSP, the GRZ, civil society and donors see agriculture as the main avenue for growth. The security and tradability of land affects investment, and investment affects growth. This link between agricultural productivity, investment and land has been central to the debate.

36. **Land distribution** affects growth.⁴⁴ As Figure 1 below illustrates, countries with more egalitarian land distributions exhibited greater economic growth.⁴⁵ Research offers explanations. Where land is concentrated, landlords have an effective monopsony in the labor market and laborers get smaller returns from increased human capital or other investments. High concentration seems to reduce the state's ability and/or incentives to invest in public works.⁴⁶

37. **Poverty reduction:** A country's initial distribution of assets is a major determinant of whether economic growth will reduce poverty.⁴⁷ In the case of women, independent control over assets is a critical

⁴³ Draft Land Policy 2002. The draft was reprinted in Zambia's major newspapers during 2002.

⁴⁴ Deininger and Squire 1998; Quan and Koo 1985; Keefer and Knack 2002.

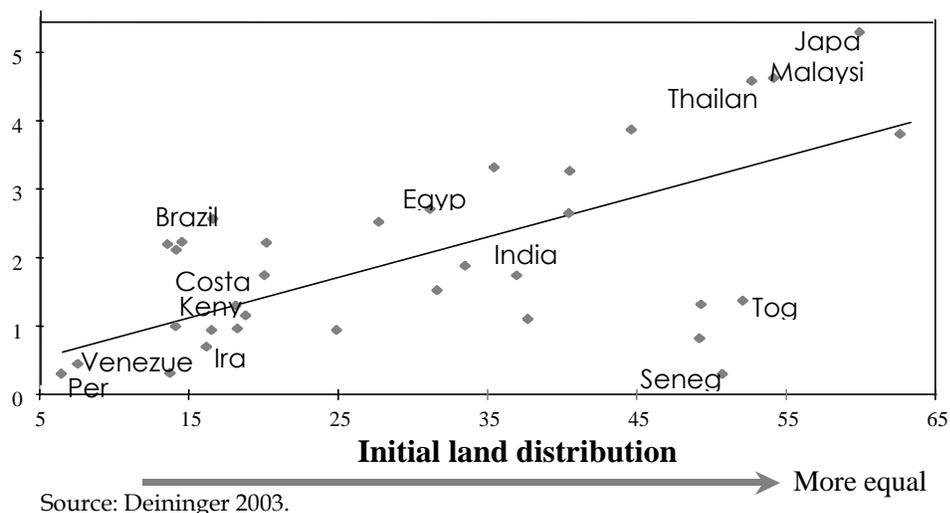
⁴⁵ "This general pattern is confirmed if more sophisticated panel techniques are used and other control variables, including the inequality of education, are included." Deininger 2003.

⁴⁶ Deininger 2003; Platteau and Baland 2001.

⁴⁷ Ravallion and Datt 2001; Gugerty and Timmer 1999; Rodrik 1998; Deininger and Squire 1998.

determinant of their welfare.⁴⁸ In Zambia, agriculture seems to be the only option that rural dwellers have for the bulk of their income in the near future.⁴⁹

Figure 1: Average GDP growth 1960-1990 and initial land distribution



38. **Social cohesion:** In countries where economic opportunities are scarce, land distribution has been important to peace. Land inequalities have spawned social tensions and conflict in many countries. Since most land arrangements in Zambia are rooted in tradition, they support informal social safety-nets and dispute-resolution mechanisms that have, in general, contributed to social cohesion.

3.2 The legal framework

39. Land reform has been on Zambia's political agenda for more than two decades. Land ownership and land transfer have been issues since before independence. The history of land, land reform and the surrounding debate is important not only as part of a nation's heritage but also as a predictor of problems, conflicts and outcomes. Policymakers need to understand what accounts for the persistency of some problems. If a situation has not changed much over time, it is likely that the barriers of the past still exist.

40. The Draft Land Policy dwells on the history of land in Zambia, starting with the colonial past. White settlers overthrew the indigenous systems of customary tenure, and colonial land policies "were oriented towards benefiting the white settlers (*sic*) population at the expense of the indigenous people."⁵⁰ The most fertile land was dubbed "Crown Land" and reserved for the white settlers, while the less fertile, or "Reserve and Trust Lands," were made available to blacks. Upon independence, the government repossessed and re-leased most of the land. As the Draft Land Policy puts it, "This Act sought to

⁴⁸ Fafchamps and Quisumbing 1999.

⁴⁹ Studies suggest that per capita incomes in countries could grow up to 2% if they can only protect property rights and pursue more competitive market policies (World Bank 2003c).

⁵⁰ Op. Cit., Chapter 1.

empower people through enabling the acquisition of undeveloped land at no cost.”⁵¹ Over the next decade, the combination of financial destabilization and “arbitrary” cancellation of Freehold and Long leases forced many farmers off their land. The 1975 Land Act abolished freehold entirely and introduced a 99-year, renewable lease. The 1995 Land Act, which provides the foundations for the current legal framework, builds on the same leasing principle.

41. The 1995 Land Act was introduced, at least in theory, with the aim of improving security of tenure, enhancing productivity, and increasing the value of land. It came out of a debate on land begun in 1993, where the government suggested amending several land-related statutes to address the concerns of insecurity, inefficiency and inequity. Nevertheless, the land policy debate in Zambia has always been controversial. The overarching policy was, hence, withdrawn after two years of debate, and Parliament instead passed the Land Act, which mostly affirmed the status quo and was vague on many critical issues.

42. The 1995 Land Act vests all land in Zambia in the President, who holds it in perpetuity for and on behalf of the people of Zambia. 94% of the land is under customary tenure, distributed by the chiefs. “Customary tenure” comprises more than 73 ethnic traditions and four types of marriage/social organizational systems, which affect access to land. The remaining 6%, held under state title, includes cities and towns, game reserves, mining areas and land set aside for commercial agriculture.⁵² The president has delegated his powers to make and execute grants and dispositions of land to the commissioner of lands, who receives policy guidelines from the minister of land. The land commissioner has agents who divide land into plots and recommend applicants for issuance of certificate of title. The agents, who act on behalf of the land commissioner, are the district, municipal and city councils. The Ministry of Agriculture and Co-operatives, through its Land Husbandry Section, is responsible for identifying, planning, demarcating and recommending land for agriculture.

43. To address concerns of inequity, the Land Act introduced a reservation of 30% of land allocations for women and other vulnerable groups.⁵³ There are no provisions for enforcement, though, and most customary laws do not allocate land to women. The act also established the Land Tribunal to address the failures of customary dispute-resolution systems and to provide for those who could not afford the courts. The tribunal was meant to balance the power of the chiefs; yet it has been moribund, and its impact has been marginal. Moreover, the “re-entry” provision which allows the government to repossess land if it is claimed to lie “idle”, which farmers and investors see as undermining the security of the lease, still persists.

44. The PRSP makes a clear statement regarding the current situation:

The Land Act was aimed at attaching value to land and enhancing security of tenure, thereby creating land markets and initiating major economic activities. It removed two obstacles to land markets: it allowed state land to be sold and customary land to be leased with the consent of the chiefs. However, very little progress has been made in market development for land, titling both customary and state lands, and setting up a land

⁵¹ Op. Cit. The Draft Land Policy claims that many settlers left the country after independence because they objected to a government dominated by blacks. Some of the settlers who were adults at independence have officially disputed this statement. According to them, the reason for migrating was financial: the government-imposed food prices were uneconomic for many producers. Within a few years, many of the commercial farms failed.

⁵² The commercial farming areas, which constitute about half the state-titled land, were apportioned between 1920 and 1960 to farmers who would grow food to supply the expanding mining ventures.

⁵³ Op. Cit.: 56.

administration system and procedure to meet the demands of such a complex task. It is therefore important to find out what the real issues are and start addressing them...⁵⁴

45. Mainly due to the political sensitivity of the problem, there is no overarching land policy. There is no written policy for state-owned lands, while lands under customary tenure operate under more than seventy different traditions.

3.3 Land: Problems of distribution and access

46. While many rural households have less than one hectare of land, about 80% of the arable land is fallow, or in other words only 20% of the arable land is under cultivation.⁵⁵ Mean land access among small and medium farmers is roughly 3 hectares; one quarter have less than 0.61 hectares. The top quartile has at least six times more land than the bottom quartile.⁵⁶ This skewed distribution occurs in a country where smallholder farming areas have fewer than 15 persons per square km.⁵⁷

Table 2: Population, land area, population density, and land access per household

Province	Population	Land Area (km ²)	Population Density per Land Area (km ²)	Ha/Household
Central	1006766	94394	10.7	3.23
Copperbelt	1657646	31328	52.9	3.18
Eastern	1300973	69106	18.8	2.20
Luapula	784613	50567	15.5	2.61
Lusaka	1432401	21896	65.4	1.98
Northern	1407088	147826	9.5	6.54
N-Western	610975	125826	4.9	1.70
Southern	1302660	85283	15.3	2.40
Western	782509	126386	6.2	1.75
Zambia	10285631	752612	13.7	3.05

Source: CSO 2001.

47. There are large variations among provinces, within provinces and, most importantly, within villages. Western, Northwestern and Lusaka provinces have the smallest mean household access, less than 2 hectares. Northern province has the largest average farm size, 6.5 hectares, but the bottom half of households have no more than the national average.⁵⁸ In the “maize belt” (Central, Eastern and Southern), the top quartile has 8-12 times more land than the bottom quartile. The dispersion is wider in Copperbelt and Northern, where the top quartile has 15 times more land than the bottom quartile. These differences are explained by agro-ecological potential, population density and available infrastructure. People tend to cluster near roads, water, schools, health centers and markets. The poorest can least afford to travel long distances or open new land. Thus, they often prefer less but better positioned land. Similarly, the poorest can afford less fertilizer and machinery. Thus, they frequently prefer a smaller,

⁵⁴ World Bank 2003a: 58-59.

⁵⁵ FAO 1998.

⁵⁶ Zulu et al 2002: 9-10. This comparison does not account for commercial farmers and the landless.

⁵⁷ Zulu et al 2002: 10.

⁵⁸ Ibid.

more fertile plot to a bigger, less fertile one. Unfortunately, given labor and input constraints, these little plots are often all that a vulnerable family (e.g., FHH or CHH) can farm.

3.4 Perspectives on the sources of existing problems

48. The current Draft Land Policy attributes most of the existing issues to customary tenure: “The customary tenure system has severe limitations.”

49. The existing literature offers several competing explanations for the variation in access to land within villages. The natural-outgrowth explanation is that some farmers simply expand faster. Others point to the “first settlers” phenomenon: the first migrants to an area enjoy abundant land, while later arrivals find less. Still others stress the role of kinship: close ties to the traditional authorities provide easier access to land. At least four factors thus determine land availability:

- Kinship (most important, relationship to the chief)
- Type of household (female-headed households are disadvantaged)
- Length of settlement (the longer, the more land)
- Other assets (the wealthier the household, the more the land is made available).⁵⁹

50. Commercial farmers point to the following concerns:⁶⁰

- Cumbersome procedures for successful farmers to acquire additional land
- Procedural difficulties with inheriting land
- Non-remunerative, controlled producer prices
- Communal grazing prevents farmers from improving by fencing or controlling disease by dividing healthy cattle from sick.

51. The ten communities studied by the 2002-03 PPR⁶¹ echoed the concerns of commercial farmers, as did the statements of NGOs and other stakeholders.

3.5 Problems: Insecurity, under-use, inequity

3.5.1 Insecurity

52. Stakeholders identify two types of insecurities: those related to state land and those related to traditional tenure. The state-tenure insecurities include bureaucratic bottlenecks, the right of government “re-entry”⁶² and corruption. The insecurities related to traditional tenure stem from the chief’s right to chase people off their land.

⁵⁹ Ibid.

⁶⁰ ACF 2002.

⁶¹ Milimo et al 2003.

⁶² In practice, this means government repossession of the land if the government establishes that the investor does not fulfill the contract, e.g., if land lies idle.

53. **State-tenure:** In theory, titled land has more secure tenure. In practice, titleholders worry about Zambia's over-centralized and inefficient land administration, its lack of transparency and its rent-seeking. The 1995 Land Act, which gives vast discretionary powers to the Commissioner of Lands, is criticized as unclear. There are numerous complaints about the arbitrariness of decision-making and the delays and costs of legal action. Research records perception of widespread bureaucratic corruption and inefficiency.⁶³ Stakeholders gave examples of land that was allocated twice because Lusaka's record did not reflect the ownership, of fees and rents statements being completely wrong and of the titling process taking more than 10 years. Without dispute-resolution mechanisms and institutions to enforce rights, title offers no security.

54. **Customary-tenure:** The chief's right to chase people off the land is not legally recognized, but it happens. Among other reasons, the chief can chase away men found drinking during working hours during the rainy season, or women whose houses are dirty. The PPR records a perception that the chief can, without motive or justification, reduce someone's land or expel them. The decision is discretionary: a man was expelled because he was flirting with the headman's wife. To accommodate new arrivals, especially "investors," the chief may be tempted to reduce villagers' holdings, especially when the investors offer "substantive" considerations.⁶⁴ Smaller commercial farmers seem leery of the long-term security of customary agreements.

3.5.2 Under-use

55. According to the PRSP, "The low utilization of land is due to the cumbersome procedures in obtaining title deeds and lack of incentives for utilization of idle land."⁶⁵ One suggested solution is the promotion of 1,000-hectare "farm blocks" to be sold to qualified local businessmen to develop commercial agriculture.

56. **Leaser Capacity:** Commercial farmers have noted that leases are often granted without any development charge, and that land rents are either not enforced or too low to encourage optimal use. Little effort is made to match the land leased with the resources or ability of the leaser. The leaser often cannot cultivate all the land allotted. Ineffective monitoring of land use by the Ministry of Lands and inadequate finance for equipment and land development makes addressing this issue difficult. Yet without title, farmers cannot get finance for development and must rely on short-term government or commercial credit. Such credit is usually linked to growing a particular crop, which prevents farmers from experimenting with alternative potentially higher-yielding crops.

57. **Markets for Land:** According to the current law, land to be leased or sold must first be converted to state land. An informal market does exist. The young sometimes hire land from those who have more than they can use.⁶⁶ The owners charge K20,000 to 25,000,⁶⁷ or one 50-kg bag of fertilizer per acre, per season. Some accept payment after the harvest: a 90-kg bag of maize is a going price for use of one acre.

3.5.3 Inequity

58. The PPR series show that although there is a general perception that a family has access to as much land as it needs and can use, a closer look reveals disparities and inequities. The various social,

⁶³ Milimo et al 2002; 2003; NGO statements, ACF, interviews.

⁶⁴ Milimo et al 2003.

⁶⁵ World Bank 2003a: 58.

⁶⁶ Skjonsberg 2003.

⁶⁷ Throughout the paper, we use the conversion of \$1 = K4,300.

organizational and marriage arrangements have built-in mechanisms that systematically exclude and disadvantage vulnerable groups, particularly women and ethnic minorities.

59. **Women's rights:** Zambia's land legislation does not discriminate by gender. In practice, however, women have almost no ownership. The PRSP states that the government has made efforts to mainstream gender in land policies and has reserved 30% of land allocations for women and other vulnerable groups.⁶⁸ There are no provisions for enforcement, though, and most customary laws do not allocate land to women. Thus, this "30%" could just be 30% of the 6% of Zambia's state-tenured land. NGOs claim that this "quota" is not even observed on state land. In the absence of systematic land records, what happens in reality is difficult to monitor.

60. The PPR and other research confirm that the customary systems discriminate against women. Women have very little access to land in both patrilineal and matrilineal communities. Studies describe the wife as a "visitor" at the husband's place. She contributes to farm work but controls neither the produce nor the money earned, since the crop was not grown on her land. There are records of women secretly stealing part of the crop while it is still in the field and taking it to her parents' or brother's home.⁶⁹ In addition, as a "visitor" the wife cannot be an executive member of any community-based organization (CBO). This affects all aspects of decision-making and dispute-resolution: "If a woman has a land dispute against a man, in most cases she loses. Most of the people involved in land administration are men."⁷⁰ The new policy does not address the issue of gender representation in the dispute-resolution system.

61. The PPR records that "women do not inherit land. Land is inherited by, given to, and belongs to males. If a woman needs land, a close relative will give her part of his own. Women have limited access to land even though they are agriculturally productive."⁷¹ The 1995 Land Act provides for a woman's right to inherit land, but is not enforced. Female respondents said that even if there were police to help them claim their land, they would not ask for it out of fear that the chief would bewitch them.⁷² Police themselves often fear bewitchment.

62. **Ethnicity:** The PRSP and the Draft Land Policy state that the traditional system treats ethnic minorities unfavorably. The PPR records two cases where ethnic issues and tensions have undermined land security and have resulted in discriminatory allocation. Ethnic dominance has been determined mostly by length of stay—the ethnic group that arrived first controls most of the best land. There are no records of violent ethnic conflict over land.

3.6 The Draft Land Policy

3.6.1 Reform proposal

63. The existing land-distribution system is widely perceived as inequitable and inefficient. Stakeholders claim that the 1995 Land Act resolved little. Their evidence is the persistence of major

⁶⁸ Op. Cit.: 56.

⁶⁹ A study conducted by the Participatory Assessment Group (PAG) for the CARE International-supported Livingstone Food Security Project (LFSP) in Kalomo and Kazungula districts in 1997-98 (Milimo et al 1997).

⁷⁰ Focus-group interview, Op. Cit.: 13.

⁷¹ Quoted in Milimo et al 2003.

⁷² Numerous interviews confirmed that bewitching is often a much more powerful threat than law enforcement. In some cases, the police have been reluctant to deal with land-grabbing for fear of bewitchment.

problems,⁷³ which underscore the need for new reforms. This was recognized, in 2002, by the Zambia PRSP which highlighted the need to amend the Land Act.⁷⁴ The Draft Land Policy is a commitment to revise that act:

The Ministry of Lands recognizes that various provisions in some of the statutes are no longer relevant. If the land delivery system is to conform with the demand for land and be universally accepted there is an urgent need to review and revise all land-related statutes...⁷⁵

64. Nearly 95% of the Draft Land Policy consists of a history of land tenure and a survey of the current administrative system. The policy objectives, and some very general proposals of how to achieve them, are stated briefly. This analysis is based on these statements:

Customary land, which is under traditional Chiefs or Chieftainesses, forms the bulk of the land, a large part of which is required for future development...*The high demand for land calls for the conversion of customary land into State Land to meet future land requirements.*⁷⁶

65. The Ministry of Land, as the author of the proposal, commits to “promoting” access to land and describes access to land as a “right.” The policy talks about “providing security to all land holdings.” Since insecurity is discussed earlier in the draft in the context of customary tenure, “security” here seems to mean titling and transfer to state-owned land. The Ministry of Land also recognizes ethnic and gender inequalities and sets aside 30% of “the land” for vulnerable groups, including women. The policy recognizes the weak capacity of the Land Tribunal and commits to strengthening it. It promises to overcome the shortcomings in the land–revenue-collection system. As the Draft Land Policy is a proposal, this analysis focuses on assumptions, risks and different scenarios in order to inform the policy debate.

3.6.2 Assumptions of the proposed reform⁷⁷

66. The government’s proposal relies on at least six assumptions:

- i) Insecurity is the key detriment to investment and development of land, and it needs to be reduced. Land held under customary tenure is less secure than titled land. Therefore, land needs to be titled.
- ii) Increased security/title will turn land into a tradable asset and collateral.
- iii) The inherent discrimination in custom translates into an inequitable land-distribution system. The state is neutral and needs to change the status quo. This should be done by allocating 30% of the land (it is not clear which land) to women and vulnerable groups.
- iv) Land is underused. Increased state ownership of land will allow for better use and management of land through improving incentives, such as increasing rents and fees.

⁷³ Land is still idle amidst land shortage, insecurity prevails, inequity has not been addressed, and there is no well-functioning land market or collateral-based credit system.

⁷⁴ World Bank 2003a: 58.

⁷⁵ Draft Land Policy, Chapter 5.

⁷⁶ Draft Land Policy; emphasis added.

⁷⁷ This section is based on the published draft and interviews with the officials responsible for the policy.

- v) Improved fee and tax collection will help future land development, through both the increased revenues for the Land Development Fund and the incentives for owners to use their land productively.
- vi) The existing dispute-resolution mechanism is inadequate. Unresolved disputes block land's potential as a productive and tradable asset. Therefore, an investment in the Land Tribunal is needed.

3.7 Poverty and Social Impact Analysis (PSIA) of the Draft Land Policy

3.7.1 *Why PSIA?*

67. From our previous discussion of the problems of the existing legal framework and the current constraints to growth, poverty reduction, and social cohesion in the sector, it becomes clear that any successful land reform would also have to take the following into consideration:

- Legal provision by itself does not ensure land access or change in practice.
- Where custom and legislation are in conflict, custom most often prevails. In the exceptional cases of discontent, conflict occurs and usually harms the more vulnerable group or individual.
- Disputed land is unproductive, but disputes, if handled by the formal system, last for years. At the local level the chiefs are most often the only functioning dispute-resolution mechanism.
- The chiefs are politically powerful due to their influence over community votes. Thus, they exercise significant influence on members of parliament and politicians. This undermines the “checks and balances” formal institutions could provide.
- Grass-root accountability mechanisms rarely exist. The one notable exception is the right to exit and settle somewhere else. Exit provides choice but not accountability, and it is not an option exercised lightly.

68. Additionally, the analysis and evaluation of the proposed reform would have to address the following questions:

- In what way would the new reform be different? What would the reform do to ensure proper implementation?
- What would make the reform pro-poor? What would be its expected impact on stakeholders? Who is going to benefit and who is going to lose?

69. Given the importance of land, ex-ante analysis of the reform proposal was considered essential. In practice, even in countries where the measures needed to improve land systems have been relatively uncontroversial, some land reforms have caused conflict, isolation and exclusion. In many cases, the reforms have lasted much longer than predicted and have deviated significantly from the original design. This has often led to unintended consequences that are difficult to mitigate.

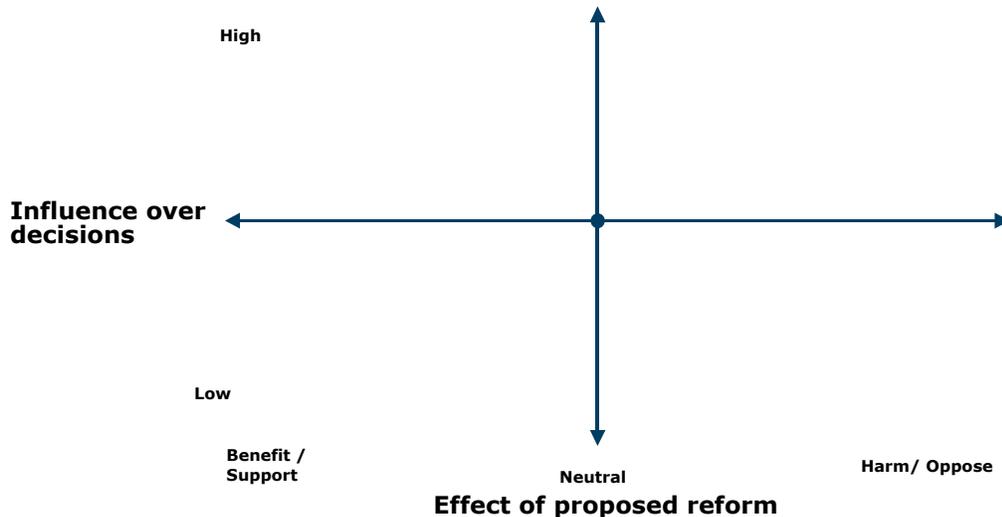
70. The PSIA focused on small-holder productivity and incomes; access to land for farmers (small-scale, commercial, foreign investors); access to land for women, ethnic minorities and vulnerable groups;

potential for equitable distribution within the current institutional framework; potential change in welfare given different scenarios related to land distribution; and the viability of the current proposal to address problems. The policy's potential impact on existing power and social structures and on different social groups was a key concern. The PSIA also examined the institutional capacity for implementation, and potential risks to and from the reforms.

3.7.2 Stakeholders⁷⁸

71. Where land is concerned, virtually everyone is a stakeholder, and the stakes are high. Understanding stakeholders, the dynamics among them, their relation to the reform and the potential and perceived impact of the reform on them are all key to understanding potential gains, losses support and opposition (for more on this, see Annex 3). The PSIA approach suggests thorough analysis of stakeholders, including dynamic mapping of stakeholders on an influence/ impact continuum.

Figure 2: Land reform - Stakeholder grid



72. To situate stakeholders on the grids, one needs to understand both their characteristics and also how the reform will affect them (or at least how they perceive these effects),⁷⁹ since this will shape their support/resistance and participation in the reform. The analysis first discusses impacts, risks, influences and perceptions and then returns to mapping the stakeholders' relationship to the reform.

3.7.3 Likely impacts of reform: Land and poverty⁸⁰

73. There is a clear relationship between amount of land under cultivation and level of poverty, even if we exclude outliers like the landless (whose ranks include teachers and doctors, who are less likely to be poor) and households cultivating more than 5 hectares. What households do with their land, however, is more important than the size. For example, large farmers tend to grow hybrid maize and cash crops, while small farmers grow standard maize and other subsistence crops. Household income rises with

⁷⁸ Stakeholders are individuals, groups, institutions and organizations who are affected by the policy or can potentially affect policy design and implementation.

⁷⁹ Since many of the consequences of the reform are dependent on behavioral change, perceptions are particularly relevant.

⁸⁰ More information is available in Annex 4.

increases in land under cultivation, even adjusting for household size. Yet the direction of causality is not as clear, since land is most often allocated based on the household's farming ability.⁸¹

74. When comparing across income quartiles, differences in land holding size is less of a predictor of income than other factors. The value of livestock and other assets, for example, is more important. A major difference is greater dependence on off-farm income, for agricultural and non-agricultural wage labor and business incomes. Access to remittances also adds to better income. Agriculture still predominates in absolute impact, though: crop income accounts for more than 55% of income for all rural households, and the share increases with landholding size and livestock holdings (see the table).

75. Focusing on *household* holdings masks large differences in *per-capita* holdings. Larger households, with higher dependency ratios, tend to have smaller household landholdings, and thus even smaller per-capita holdings. Such households also tend to be poorer—i.e., in the first or second income quartile.

Table 3: Household characteristics by land per capita and by income per capita
(Data by land quartile in regular font; data by income quartile in bold type)

	Average	Quartile			
		1 st	2 nd	3 rd	4 th
Household (HH) land access (ha)	2.81	0.79	1.61	2.68	6.16
	2.76	2.27	2.65	2.99	3.12
HH members (#)	5.78	6.79	6.11	5.55	4.69
	5.9	6.3	6.0	5.8	5.3
HH per capita land access (ha)	0.58	0.12	0.26	0.49	1.46
	0.56	0.42	0.48	0.58	0.75
Female headed HHs (%)	23.8	27.7	22.6	21.8	22.1
	24	31	28	19	17
# Adults in HH	3.16	3.58	3.25	3.07	2.73
	3.24	3.34	3.25	3.25	3.12
Per capita land rented (ha)	0.21	0.10	0.17	0.29	0.51
	-	-	-	-	-
Per Capita Income (US\$ 2000)	62.9	48.2	53.3	65.9	84.2
	57.1	8.4	23.6	47.8	151.0
Crop income Share (%)	67.2	57.2	69.5	69.2	72.8
	69.3	75.7	75.7	72.8	53.2
Livestock Income Share (%)	4.4	4.3	4.8	4.2	4.3
	3.4	3.0	3.0	3.9	3.8
Off-farm Income Share (%)	28.4	38.5	25.7	26.6	22.9
	27.3	21.3	21.3	23.7	43.0
<i>Of which:</i>					
Remittances (%)	5.2	5.5	4.3	4.8	6.0
	5.7	10.7	5.9	3.7	2.9
Business Income (%)	13.8	16.4	12.6	14.0	12.3
	14.8	8.7	12.7	14.3	23.0
Salary, Wage Income (%)	6.7	11.6	6.3	5.6	3.5
	6.1	1.6	2.3	5.0	15.0
Aggregate Wage Labor (%)	2.7	5.0	2.4	2.2	1.1

⁸¹ Milimo et al 2003.

	2.4	29.4	21.0	1.7	3.1
Small farm wage (%)	1.3	2.1	1.3	0.9	0.7
	1.3	2.6	1.3	0.8	0.7
Large farm wage (%)	1.4	2.9	1.1	1.3	0.4
	1.0	0.1	0.4	1.0	2.5
Value of Livestock and Equipment per capita (US\$ 2000)	39.3	24.9	37.5	39.0	54.6
	38.5	13.7	23.5	37.0	75.8

Source: The data are from two linked surveys undertaken in the 1999/2000 crop year by CSO. The CSO Post-Harvest Survey contains over 6,000 households. The data are mostly for smallholders, with some medium-scale farmers. See Jayne et al. 2001: 25-36.

76. The rural-household model shows that land constraints force households to concentrate on staple foods. Scenarios where land is limited show that households that use hand-hoe cultivation needs at least 2.2 hectares to produce enough (local) maize for food security. Yet oxen cultivation can produce more than twice as much on slightly less land. This shows how land reform, if combined with labor-saving technology, could help poor farmers.

77. Of course, oxen technology requires renting oxen. This requires considerable cash or credit at the start of the planting season to rent the oxen and buy inputs, cash that few households have. Moreover, the number of oxen has fallen by half over the past decade.⁸² The loss of livestock for plowing has reduced the total area cultivated and timeliness of planting, and increased weed problems and labor demands.

78. Concerns for food security prevent households from specializing. The analysis also shows the difficulty in moving smallholders from subsistence to commercial growing. In particular, given the low returns to existing farming technologies, the investment costs to move toward commercial agriculture (oxen cultivation, irrigation etc.) are considerable. In remote areas, such investments are even less plausible. Furthermore, many cash crops experienced falling and stagnant prices from 1994 to 2001, while input costs tended to increase. In any case, returns to labor have remained low and often fell, even when yields improved.

3.7.4 Likely impacts of reform: Security of land tenure

79. The impact of security of property rights on overall growth is well documented.⁸³ Security encourages investment, secure land can be used as collateral and secure land can be traded. Moreover, security is proven to induce better land management.

80. The PPR respondents were aware of many benefits of secure title. For example, they stated that commercial farming requires land to which one has exclusive access. Title would allow people to fence their land and thus separate healthy livestock from sick. Yet respondents recognize the government's limited ability to ensure tenure security, as do officials, NGOs and commercial farmers.

81. Tenure security requires both clear legal provisions *and* implementation. Security is not inherent in any one system. It depends on the clarity with which rights and obligations are defined, the quality of

⁸² Reasons include repeated droughts, spread of the tick-borne corridor disease, and deterioration in the availability and affordability of veterinary care. See Copesake 1997.

⁸³ Keefer and Knack 2002; World Bank 2003c.

property-rights records and whether these are guaranteed by the state.⁸⁴ Strong *de jure* property rights are of limited value if they can not be enforced at the local level, whether because *de facto* institutional capacity is weak or because the rights are not clearly defined. The major causes of insecurity in Zambia seem to lie outside the legal framework. This means that changing legislation or issuing a policy might not do much.

82. The Draft Land Policy does not provide for an accountability mechanism for the land administration. This is noteworthy, given that bureaucratic bottlenecks and corruption are officially recognized issues.⁸⁵ The policy does not address another important issue: how much titling would cost and how equity in affordability would be encouraged. The policy is not the right place to declare prices, but it is the right place to declare that different groups can be treated differently, in order to address fundamental structural inequities. Otherwise, the reform will reinforce existing cleavages between social groups.

83. The PPR records widespread concern that titling will turn most of the farmers into a landless rural proletariat, too poor to pay for title deeds and annual ground rates. People fear official corruption will drive costs even higher. In addition, fees and rents would consume scarce cash, which is needed for the timely purchase of inputs, children's schooling and other needs.

84. Full individual ownership with formal title provides secure and transferable land rights when land scarcity and commercialization of the economy have reached certain advanced levels. Where they have not, cheaper, less formal measures can do the same work.⁸⁶ Since the costs of titling are high and the returns dubious, titling could artificially suppress demand and actually increase insecurity. Not having a title is less of a problem when almost no one has one. Once most have titles, though, those who do not become easy targets.

85. In many countries, increased state ownership has not led to increased security, efficiency or equity. Forests and pastoral areas, in areas both rural and urban that have been transferred to state control, have often proven less effective and efficient than those controlled by the directly affected.⁸⁷ This has been especially significant in Sub-Saharan Africa, where communities have been strong, and local-level, formal institutions are often weak.

86. Extensive land reform would probably increase land disputes even if institutional capacity were high. In many cases, titling unintentionally excludes those who cannot afford it or who lack access to dispute-resolution system. In Zambia, this includes the vast majority of the rural poor.⁸⁸ Zambia needs preliminary investment in decentralized land administration. The land policy recognizes the importance of strengthening the Land Tribunal, but it does not specify the "phasing of the reform." Arranging access to dispute resolution needs to precede any serious land reform.

3.7.5 Likely impacts of reform: Use of land

87. There is consensus among stakeholders that improving productivity requires inputs, credit, extension services, farm power, output markets, infrastructure and labor-saving technology. Respondents

⁸⁴ Deininger 2003.

⁸⁵ The Minister of Land has publicly invited the Anti-Corruption Commission to try to improve matters.

⁸⁶ Deininger 2003.

⁸⁷ Ngaido and McCarthy 2002; Kaganova and Nayyar-Stone 2000.

⁸⁸ In Albania, systematic titling efforts resulted in disputes over more than 30% of the land. Kenya is another example where titling has increased insecurity and worked against investment. See Bledsoe 2002.

in the ten communities studied by the PPR knew that titles could be used as security for loans, but most did not think this particularly important. Short-term loans, in the form of farm inputs, are frequently available without title. For larger projects, group loans—which do not require collateral—are more popular. No formal loan facilities, of the type that would accept land as collateral, exist for those with titles to use.

88. Titling makes economic sense if the value added by titling is greater than the cost of titling. Titled land has little value when it is in a remote area, as most Zambian land is. Zambia's poor infrastructure keeps most land values low; titling, by itself, will not change this. Infrastructure investments should take priority. Where it makes economic sense to title land, pilots could be started—but cautiously, so as not to price the poor out of the market for land near infrastructure.

89. Using land as collateral implies high risks. Should the rains, and thus the harvest, fail, people could lose their land. In the absence of social security, land serves as a safety net; land foreclosures could thus deprive households of the basic means of survival. Therefore, even if land is fully tradable in law, it might not be practiced because of the social implications of such trades.⁸⁹

90. The inheritance structure is key if land is to be used for collateral, because of the HIV/AIDS epidemic. Men do not engage in long-term group borrowing because if anyone dies, the rest are responsible for his share. This is why the agencies that make such loans have moved away from collateral. Banks will be unwilling to lend unless they have a guarantee that whoever inherits the land inherits the loan. The government, civil society and private sector agree that there needs to be support for women's inheritance rights.

91. The Draft Land Policy commits the government to improving “revenue generation from land.” Higher rates and fees are seen both as funds for improving the land administration and as incentives for owners to use land more productively. This implies considerable costs (at least initially) for both government and landowners. How are vulnerable groups, smallholders and the impoverished going to pay? What type of payment system will be created? How are the taxes and rents going to be calculated? Who will administer the system; who will hold it accountable? What will happen to those who do not pay? How can people claim their rights? Current title holders complain that they often receive tax and rent bills with the wrong information. When this happens, to whom should you complain? How much would it cost? Unless a clear and affordable mechanism exists, the result would be corruption, loss of land or both. The Draft Land Policy is silent on these questions.

92. Commercial farmers argue that, to avoid misallocation and misuse and to attract “capable” investors, stringent but realistic selection criteria should be adopted.⁹⁰ They call for improved rent collection, assessment of investor capacity and rent assessment according to the following criteria: rainfall, available surface and subsurface water, access to communications, including roads and telephones; access to electricity, distance to market, suitability for specific crops, any limitations, such as the tsetse fly; and the physical security of persons and property. Overall, rents should be high enough to ensure that the land will be used; revenues beyond recovery costs should go to a land development fund. Most importantly, the commercial farmers want absolute ownership and limited farm settlement blocks.

⁸⁹ As in Kenya; see Atwood 1990.

⁹⁰ For more detail, see the stakeholder analysis in Annex 3.

93. Despite the advantages that these farmers point out, any increase in rents or improvement in rent collection will disproportionately affect low-income groups. Pegging land rents to infrastructure is dangerous, because the poor would only be able to afford land in remote, unconnected areas.⁹¹ While commercial farming is important, a good balance is needed.

94. A major justification for titling land is to be able to trade it outside of the community. Such trade is only possible where there is a reliable land registry. Given that Zambia does not have one, the impact of titling on the ability to trade would be marginal. In any case, given the existing household labor constraints, it is difficult to see how formal land markets will have a substantial impact on poverty reduction. Even if formal means “better functioning,” rental markets do not seem to be a pressing issue. The current, informal system functions relatively well and yet has relatively little impact.

95. Idle land can be a type of safety net. Many city-dwellers hold onto their rural land as old-age insurance. State resettlement schemes are often a “pension” plan for civil servants. In a titled system, these “absentee landlords” would have an incentive to rent or sell their land if rents or prices were high enough—a short-term gain with a long-term cost.

96. Much land lies idle despite being titled and despite existing demand.⁹² The lack of inputs, technology and labor encourages this. The government has recognized the problem of idle land since at least the early 1980s, but has made little progress in solving it.

97. Generally, individuals’ and entrepreneurs’ willingness to invest in land depends on whether they will be able to enjoy the returns. Freehold rights that are defined in perpetuity or are inheritable are therefore more conducive to investment. Yet secure, long-term leases, especially ones that can be transferred, can provide many of the advantages of full ownership. In Israel, for instance, most land is state-owned and leased to farmers for 49 or 99 years, without any negative impact on land or credit markets.⁹³

98. The experience of China in the 80s and 90s shows that land “assigned” to individuals and owned by communities can produce remarkable boom in investment and entrepreneurship. China adopted the Household Responsibility system under which Township and Village Enterprises (TVEs) had the formal ownership. Qian argues that in the context of China, property rights were effectively more secure under direct local ownership.⁹⁴ This is not to argue that Zambia and China are similar but just to point that different solutions work in different contexts.

99. In Zambia, insecurity does not flow solely from the duration of tenure rights. The official and unofficial conditions that allow for state expropriation are equally important. Ownership rights that can neither be demarcated nor transferred are poor incentives for investment and efficient use. Banks will not accept such land as collateral. On the other hand, leasehold or even usufruct rights can be long-term, secure and transferable such that they become virtually indistinguishable from ownership. The leasehold rights implied in the Draft Land Policy inspire no such confidence.

⁹¹ Milimo et al 2003.

⁹² In two of the PPR sites, participants were aware of considerable blocks of good land with clear ownership lying idle.

⁹³ Lerman 2001.

⁹⁴ Qian 2003.

100. The policy is unclear on the future of the provisions in the current law that limit ownership and cap holding size by non-Zambians. It does say that it will “support initiatives by local investors and where appropriate assist foreign investors through the provision of land...” Many stakeholders read this statement as granting priority to big and foreign investors. The recent influx of Zimbabwean farmers has shown that new investors usually prefer already developed land with existing infrastructure. More often than not, they have chosen to rent abandoned land on existing farms. While any future policy should not ignore the needs of larger and wealthier investors, it should provide for the security of the small- and medium-holders who develop land, not let them be pushed aside.

101. The Draft Land Policy talks about identifying “suitable investors,” but does not define “suitable.” Does this mean someone who will create more jobs, or simply someone with no criminal record? Will the law give priority to commercial farmers to ensure growth, or to small-scale farmers to address poverty reduction more directly? The definition of “suitable” is especially important to ensure transparency in how the policy will balance the interests of both types of farmers.

3.7.6 Likely impacts of reform: Access to titles and resources

102. Even now, when only a handful of people apply for a title, it takes ages to obtain title deeds. In the case of one farmer, who had held a senior government position and knew the ropes, it took four years to obtain the title deed. Another farmer has been waiting for a title since 1977.⁹⁵ The process will take even longer if large numbers of people apply at once, as they would after reform.

103. The Draft Land Policy reserves 30% of “the land” for vulnerable groups and women. This raises some questions. Which land, and for whom? The draft lacks a working definition of “vulnerable” that the government could use to plan implementation or that stakeholders could use to claim their rights. How will the government ensure implementation? The idea and the percentage are not new (although it appears to be arbitrary, given that this is not the actual percentage of female- or child-headed households⁹⁶). The draft suggests no institutional arrangements to achieve this objective. This is troubling, since the PPR respondents state that government ends at the district level and the Land Tribunal ends in Lusaka. Moreover, as in the past, it would be impossible to monitor implementation without an updated record.

104. The major problem is that the provision clashes with customary law. Since equity is not inherent in a type of land ownership but results from the enforcement of rights that were once unavailable, implementation is what really matters.⁹⁷ Experience shows that those who claim newly introduced rights, especially ones that contradict the prevailing custom, are at risk unless there are institutions to protect them. In Zambia, women’s and other vulnerable groups’ rights have historically been neglected, and they are least able to take costly measures to defend them. “Policing” rights is only a short-term solution to provide the necessary time for behavioral change. Attempts to replace “custom” with formal means of securing ownership have proven difficult to implement around the world. Wherever the formal means have been too costly or incompatible with traditional norms, less costly or socially acceptable means were used.⁹⁸

⁹⁵ IFC 2003.

⁹⁶ Milimo et al 2003. As HIV/AIDS takes its toll, the ratio is likely to change further.

⁹⁷ Existing literature provides a wealth of discussion and data on the issue of rights without an enforcing “agent,” from Kant 1788 to Sen 1999, De Soto 2000 and Deininger 2003.

⁹⁸ Firmin-Sellers and Sellers 1999.

105. Equity is not necessarily embedded in individual titles. There are many cases—indigenous groups, herders, marginal agriculturalists—where defining property rights at the group level and then adjusting the property-rights system when needed can more efficiently reduce outsider encroachment and ensure individual security. As long as groups have mechanisms for resolving disputes and decision-making processes that are representative, securing group rights can contribute to more sustainable land management and more equitable access to productive resources. Further, communal titles that are administered transparently can provide tenure security at a fraction of the cost of individual titles.⁹⁹

106. The Draft Land Policy commits to encouraging people with special needs and other disadvantaged groups to own land, but it is silent on how to go about doing this, on what type of land, and at what price. At present, most chiefs regulate land use according to the capacity of the households to farm it.¹⁰⁰ Many chiefs redistribute some of the land-use levies to help vulnerable members of the community. It is uncertain that more land would help vulnerable households, given the labor constraints and the lack of tools and inputs. The Draft Land Policy does not discuss any special provisions for such groups. The PRSP adopts a market-based approach, yet data shows that female-headed households (FHHs), child-headed households (CHHs) and other vulnerable groups are less likely to have access to cash. If land is titled and fees and rents have to be paid, they will presumably have to be paid in cash. The timing of cash payments can be crucial for welfare—e.g., they should not coincide with the buying of fertilizer or paying of school fees. The policy need not set the rates, but the payment cycle and type of payment are important.

107. Titling is perceived as limiting access to hunting and gathering. Most of the women interviewed expressed fears that granting title deeds would deny them the opportunity to collect mushrooms, firewood, thatching grass and wild fruit from the forests, since walking through other people's titled land would be regarded as trespassing. Men noted that they would not be able to collect honey in other people's land once the land was titled. There is also widespread concern that title deeds may limit access to water sources.¹⁰¹ Rural people fetch water from streams, rivers and dams, access to which may be prohibited if pieces of land are individually owned. It is unclear how access to common property like wells will be ensured. Taken together, these concerns constitute a serious threat of increased vulnerability, poverty and possibly conflict.

3.7.7 Likely impacts of reform: Impacts on institutions

108. The chiefs derive their power mostly from their land-distribution authority.¹⁰² Shifting land to the state will devastate this power. Villagers are concerned that diminishing the chief's role will affect the peace and cohesion in the community. The chiefs are the major dispute-resolution and "law" enforcers. Undermining their power will create an institutional vacuum that the government does not, in the short run, have the resources to fill.

109. The study of Kefa illustrates the costs of such an institutional vacuum. The village has not had a properly appointed headman for about ten years. The common spaces and common property have deteriorated: "Trees and grasses are allowed to grow, and falling-down houses are left to rot, where the [old] headman...was very adamant that grass and bushes should be cleared and falling-down houses demolished, so as to do away with snakes and mosquitoes...." Most importantly, where 500 people live

⁹⁹ Heath 1994; Deininger 2003.

¹⁰⁰ Milimo et al 2003.

¹⁰¹ Milimo et al 2002; 2003; stakeholder interviews.

¹⁰² Milimo et al 2002; 2003; Skjonsberg 2003; interviews.

together, conflicts are bound to develop; if there is no authority to resolve conflicts, then security breaks down. Community work suffers, too, since “It takes a leader with special skills to infuse underfed and tired peasants with sufficient enthusiasm (or fear) to get things done.”¹⁰³ Such a situation hurts the weak most. The better-off either get access to formal dispute-resolution mechanisms or ensure their interests through force.

110. Formal institutions are weak. The president’s functions regarding land distribution and disputes are very limited. The president normally uses his power only to decide on major roads and construction projects of national or strategic significance, such as dams and mines. There is no evidence of the president abusing his land rights, but there is a widespread perception of corruption in the Ministry of Land. This makes a shift to state-owned land grounds for worry, since it implies increasing the Ministry of Land’s powers without putting an accountability system in place.

111. The Draft Land Policy promotes the decentralized distribution system currently used for state land: “The Commissioner of Lands has agents who plan the land into plots and thereafter select and recommend suitable applicants to the Commissioner of Lands for issuance of certificate of title. The agents who act on the behalf of the Commissioner of Lands are the District, Municipal and City Councils...” These “agents” are political bodies with very little capacity. The district councils reflect the society’s gender and ethnic biases. Most are predominantly male and among the ethnic majority. The policy says nothing about insuring against partisan favoritism or building capacity. Donor experience¹⁰⁴ reveals very little capacity at the district and municipal level. The existing Land Development Fund often goes underused because the districts do not know how to apply for funds. In general, decentralization is a very young process, and capacity-building demands serious investment.

112. The Draft Land Policy does not sort out the overlapping duties of several ministries that deal with land (see the stakeholder analysis in Annex 3 for more details), nor does it detail the future relationship of the chiefs to the state. The draft policy does not demarcate the chiefs’ and the Ministry of Agriculture’s responsibilities for land.¹⁰⁵ Experience shows that unclear responsibilities and parallel power structures are likely to result in conflict.¹⁰⁶ This is an even greater risk when the policy and legal framework does not at least formally delimit the boundaries of authority. Vagueness over responsibilities is bound to cause confusion, because the involved parties might have a flexible interpretation of “custom” and/or pursue disputes through different, parallel authorities. Zambia is in danger of falling into the common shortcoming where different entities lack coordination and often compete with each other:

There are many examples where lack of clarity in institutional responsibilities resulted in the issuance of multiple titles to the same plot. This does erode confidence in the land administration system and creates a need for corrective measures that are politically difficult and economically costly.¹⁰⁷

113. The lack of communication and inability to update the register has already resulted in many cases of displacement and dispute.¹⁰⁸ NGOs expressed concerns regarding cases where land was given to new

¹⁰³ Skjonsberg 2003: 8.

¹⁰⁴ GTZ has been one of the most engaged in decentralization and capacity-building.

¹⁰⁵ “The Ministry of Agriculture and Co-operatives through the Land Husbandry Section, is responsible for identifying planning, demarcating and recommending land for agricultural purposes...”

¹⁰⁶ Deininger 2003.

¹⁰⁷ Muñoz and Lavadenz 1997.

¹⁰⁸ For more details, see the land section of IFC 2003.

commercial farmers irrespective of the rights of the smallholders already farming the land. To avoid such conflicts, the policy needs to state what types of landownership and occupation would be recognized. The government will need to update its maps and registers.

To achieve its stated goals, the government needs effective dispute-resolution mechanisms. At present, the courts are slow and too expensive for most rural Zambians. Despite its goal of relieving pressure on the judicial system, the Land Tribunal has failed to provide adequately for those who can not afford the courts. Most people see the Land Tribunal as moribund, due to its paltry budget and very limited capacity.¹⁰⁹ The Draft Land Policy recognizes these failures and stresses the Land Tribunal's role in making dispute resolution faster and more accessible. The policy does not commit to what should be achieved, or how much will be invested and when. Will the Land Tribunal reach to the district level? Is there some accountability system or representation criteria? The 1995 law states that the Land Tribunal should consist of not more than three members of the private and the public sector. This is a vague provision open to abuse. It would be wise to go ahead with a reform before the Tribunal is strengthened.

114. In the case of reform, disseminating information about land availability, prices and quality will be very important. Without a transparent and accessible system, the rural poor are likely to be disadvantaged.

115. Experience around the world, emphasizes the serious attention the above mentioned issues deserve. The experiences of Uganda and Mexico illustrate all too well how an institutional vacuum created by new laws without matching institutional capacity for enforcement can be a major source of insecurity and conflict.¹¹⁰

3.7.8 Potential risks

116. Some of the main risks have already been discussed. There are a few more worth acknowledging. These can be thought of as risks *to* the reform and risks *from* the reform.

117. The key risks *to* the reform are climate, HIV/AIDS, political economy, and elite capture. Climate comes into play because insufficient rain, combined with private borrowing and the use of land as collateral, could force many people off their lands. Due to climate change, the prospect of drought is greater than in the past. Similarly, depending on soil fertility and weather, smallholders might be unable to pay their rent. This is likely to become a politically and socially sensitive issue.

118. The threat from HIV/AIDS is that it will reduce the government's implementation capacity even further. The extension service, for example, has lost many skilled personnel to the disease. Any capacity-building efforts need to consider that the high infection rates will increase costs. At the same time, the epidemic will reduce available labor and increases household food security requirements. Dependency ratios are likely to increase, as are costs for medication or treatments and time to nurse the sick.

119. Political and/or economic conflicts have slowed the process in most countries in the region that are trying land reform. Zambia already has a history of political discontent over land reform plans. It is important to consider possible political blockages because, as the Kenyan experience shows, once the reform is started, periods of government inaction can have very negative impacts.

¹⁰⁹ See institutional analysis for more details.

¹¹⁰ McAuslan 1998.

120. Finally, as already discussed, elite capture of benefits is quite likely unless smallholder rights and affordability issues are addressed in advance. There are two major risks *from* the reform: increased vulnerability (higher costs, landlessness, access to resources) and increased insecurity (where institutions fail to protect those in need). Corruption and conflict, meanwhile, are risks both to and from the reform.

3.7.9 Stakeholder analysis revisited

121. After having analyzed potential impacts, relationships and risks, we returned to the stakeholder analysis. Figure 3 assigns each of the analyzed stakeholders a symbol to be used in the analysis (for a more detailed description, see Annex 3).

Figure 3: Land reform – Key stakeholders

Government and State agencies	Private Sector	Civil Society
1 The President	16 Commercial farmers	25 The Chiefs
2 Ministry of Land	17 Small scale farmers	26 Landless
3 Lands Tribunal	18 Surveyors	27 Herders
4 The Judiciary	19 Lawyers	28 FHHs , CHHs
5 Office of the Vice -President	20 Foreign Investors	29 Minority Ethnic Groups
6 Ministry of Legal Affair	21 Commercial Banks	30 Zambia National Farmers Union (ZNFU)
7 Ministry of Local Government and Housing	Donors	31 Local NGOs
8 The City, Municipal and District Councils	22 USAID	32 International NGOs
9 Ministry of Agriculture and Cooperatives	23 WB/IMF	33 Media
10 Ministry of Works and Supply	24 DFID, GTZ, EU	
11 Ministry of Commerce, Trade and Industry		
12 Ministry of Tourism, Environment and Natural Resources		
13 Ministry of Finance		
14 Parliament		
15 The Police Force/ Ministry of the Interior		

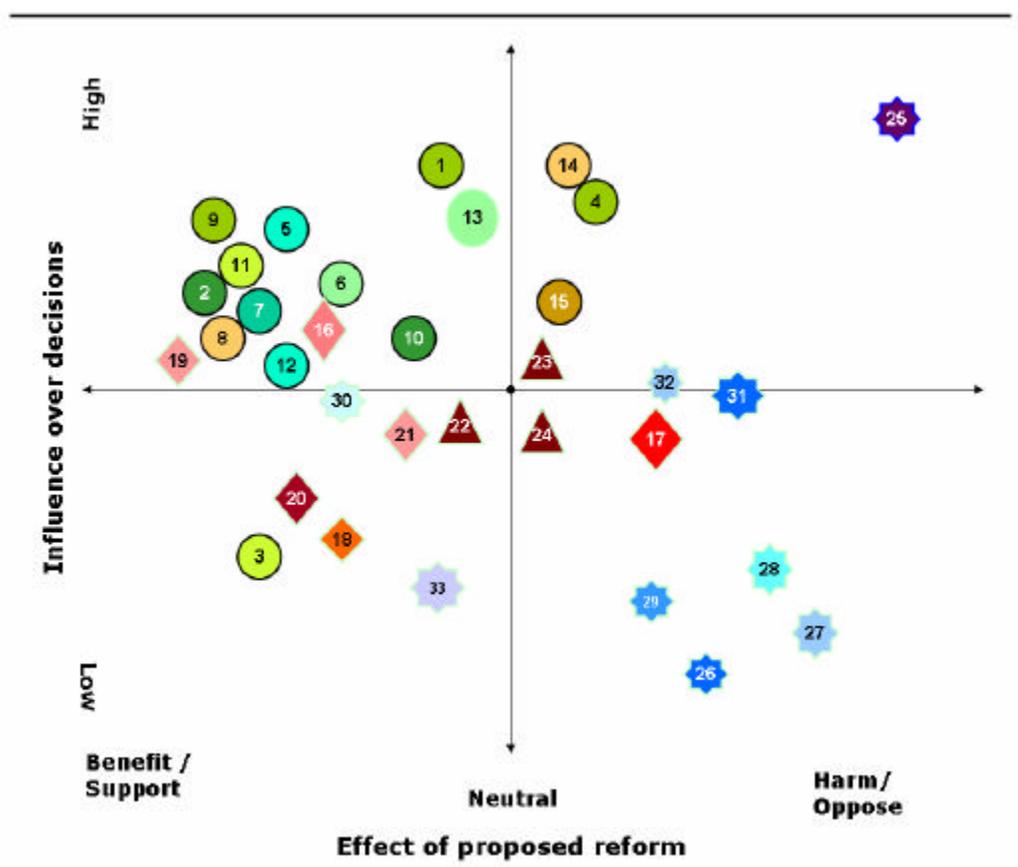
122. Bearing in mind the findings of the qualitative and quantitative work, as well as of the many interviews, focus groups and meetings, we could start mapping stakeholders' relationships with the reform in a dynamic way. We used the continuum of influence/ impact as an organizing principle.

123. Figures 4 and 5 show the relationships of stakeholders to the reform and to each other. (Symbols are projected relative to each other and the zero point; the Euclidean difference does not matter.) Some stakeholders identified their positions themselves. Their statements were "triangulated" with existing data (see Annex 3).

124. Figure 4 situates stakeholders by their interest and influence over decision-making, while Figure 5 shows their interest and influence over implementation. The two are different. For example, surveyors

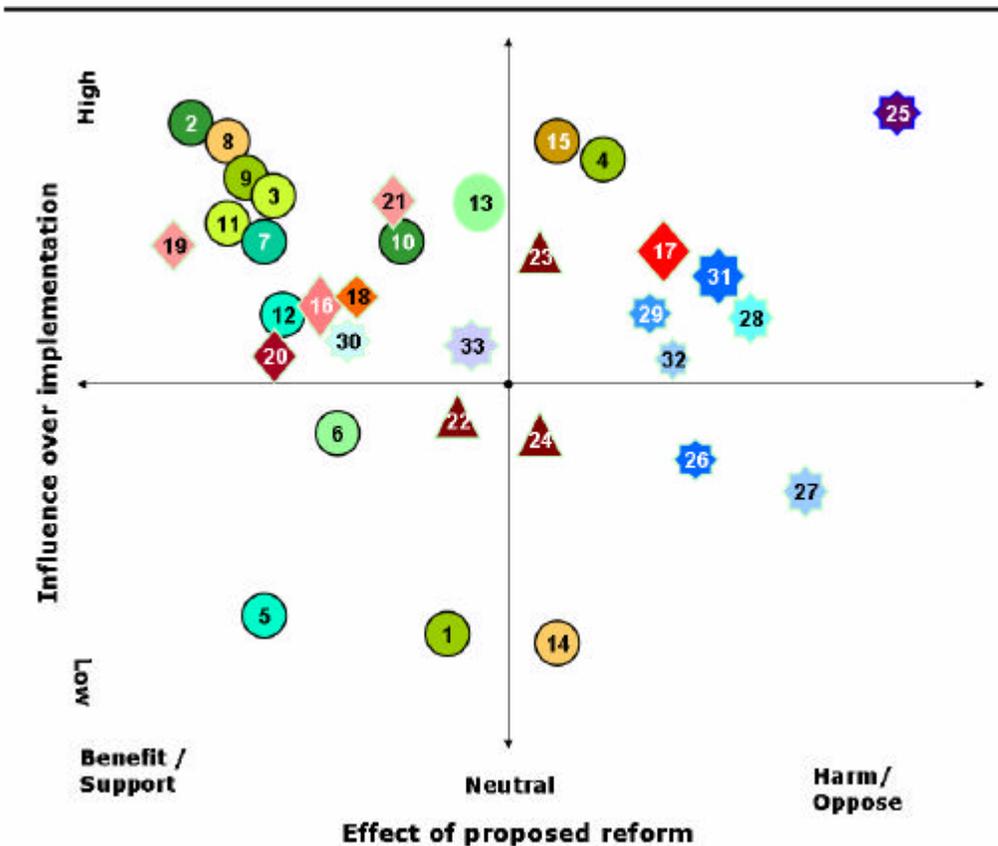
could have significant influence over policy implementation but not on decision-making. There are 24 private and 15 government surveyors. They will be key implementers of any reform, even something as simple as updating the land registry. The smallness of the group warrants preemptive capacity-building to prevent “blockage” or delays.¹¹¹ Another example is the media. It can help implementation by spreading timely, correct and necessary information, or harm it by not doing so.

Figure 4: The land reform as suggested by the Government - Stakeholders’ perceived influence over decisions



¹¹¹ Such a group would also need to be held accountable. Collective action theory shows how, the smaller the group, the more likely it is to organize and act to protect its own benefit (Olson 1984).

Figure 5: The land reform as suggested by the Government - Stakeholders' perceived influence over implementation



125. It is interesting to note that the stakeholders who are supposed to be the beneficiaries (e.g. women, poor rural households, etc) do not necessarily see themselves as such. Perception is not all, but if the support of certain stakeholders is key to implementation they, need to have the correct perceptions. The graphs also illustrate the significant potential for conflict already discussed. Conflict, even if based on incorrect perceptions, is dangerous and damaging.

3.8 Land: Policy options for the future

126. Implementation is as important as legislative change. It needs to be carefully mapped in advance. To reduce the risk of unintended consequences, legislative choices need to be made in view of implementation capacity, not vice versa. The challenge here is to ensure capacity to demarcate and record property rights and to enable their cost-effective enforcement.

127. It is clear that “The lack of *formalized property rights*, which prevents people from turning their latent assets into live capital, is one of the key determinants to growth,”¹¹² but “formalized” need not

¹¹² de Soto 2000; emphasis added.

mean individually titled. What constitutes an economically, socially and politically acceptable, feasible scenario for Zambia?

128. Key stakeholders argue that traditional land should be given legal status. Such a law should allow the lease and sale of customary land, without converting it to state control. They also propose an agricultural assistance fund to help smallholders acquire, open and develop new land. For more details, see the stakeholder analysis in Annex 3.

3.8.1 Policy implications: Legal options

129. The legal framework could allow different ownership systems depending on population density, level of economic development and infrastructure. Pilots could be run in the different contexts. Improving the existing state land system would help build experience for nation-wide decisions. One option for acquiring and relinquishing land rights is both desirable and already available. Giving legal protection to long-term, peaceful occupation in good faith, known as “adverse possession,” especially of public land, has had significant poverty impacts, reduced conflict and lowered the cost of secure tenure. Respecting the rights of occupants, and even making oral evidence admissible as proof for such rights, has helped build stability quickly and cheaply. In Mozambique, legal provisions for adverse possession based on oral evidence gave security to occupants, despite the government's limited capacity to survey and record such rights.¹¹³

130. Customary tenure has often been considered an economically “inferior” arrangement. Experience and research do not support such a view. In most African countries, formal land systems cover 10% of the land at most.¹¹⁴ Customary institutions have strong local presence and are very often trusted by the locals. Customary tenure is only insecure if the legal system does not recognize traditional rights. If customary institutions are accountable, then their formal recognition could benefit everybody. Building on the advantages of customary tenure, many African countries have adopted combined measures, such as decentralized management through local authorities and codification of principles and rules. Recognizing community rights integrates the mass of land users into the formal system while letting existing (or sometimes new) local institutions solve land disputes and guarantee rights at the local level.¹¹⁵ Mechanisms for demarcating and recording the boundaries of community and individual land have been established. For example, Tanzania’s land policy establishes a Certificate of Village Land and designates the elected village council as trustee for land. Household plots are registered as individual customary holdings, but land is held and registered by the village. In this case, the law also provides a range of options for landholding. Land previously acquired by the state can be transferred back to the village.

In Mozambique, the law protects customary rights without registration: local communities have legal status, eliminating the need to survey every plot yet giving protection by delineating community boundaries. Foreign investors and outsiders can acquire use rights only through consultation with communities.¹¹⁶ In Benin, customary rights are recognized and validated in a participatory fashion. Individuals with registered customary rights, can apply for land certificates or full registration, both of which can be used for credit. The charges are based on cost recovery. Land management is done by committees at village level.¹¹⁷

¹¹³ Deininger 2003.

¹¹⁴ Oosterberg 2002.

¹¹⁵ Toulmin and Quan 2000.

¹¹⁶ Tanner 2002.

¹¹⁷ Pescay 2002.

131. Customary rights should not be recognized, though, without complimentary measures to enforce the rights of vulnerable groups and women. There are ways to do this in both customary and state systems. One already tested option is to introduce local elections for village committees or chiefs as a prerequisite for recognizing customary arrangements. This helps improve responsiveness and inclusion in economic and social life beyond land.

132. Rights could be and have been awarded to groups. The law needs to specify the obligations of individuals within the group, and how they can be changed. The institutions that administer land rights need to be accessible and accountable. They need to follow clearly defined procedures and provide authoritative information at low cost so as not to discriminate against the poor.

133. The hypothetical stakeholder analysis of a “blended” reform scenario—one that recognizes traditional arrangements, respects rights for vulnerable groups and provides group titling—is in Annex 3. It is hypothetical, of course, but the positioning of stakeholders with respect to it shows much less disbursed influence and interest, which may imply less conflict. It also reduces some of the institutional risks, which more often than not result in risks to the most vulnerable.

3.8.2 Institutional options

134. The establishment of well-functioning land administration systems was a long process in today’s developed nations.¹¹⁸ Where such systems do not exist, it is important to have a prioritized strategy that provides services broadly, transparently and cheaply. In many countries, large-scale tenure formalization programs have been successful. They have done less well in much of Africa, where the cost of formalization is too high. For these countries, the magnitude of the task, the requirements of full title and the shortage of capacity often make it impractical to award freehold or complete title. Options that would increase the tenure security of informal rural and urban dwellers are needed. These include:

- A streamlined and simplified title registration system, as was introduced in Peru¹¹⁹
- Long-term, transferable leases, as implemented in many Indian cities¹²⁰
- Legal measures that guarantee occupancy rights, and recognition (including record-keeping) of such rights at the local level.

135. The danger here is that a country will end up establishing two parallel tenure systems.¹²¹ Ensuring the compatibility of any simplified registration systems with an eventual formal titling procedure is essential. Where enforcing property rights is too costly or the bureaucracy is not dedicated, the government might recognize “private enforcement” arrangements.¹²²

3.8.3 Participation

136. Participation is important because of the sensitivity of the issue. The stakeholder analysis reveals that the reform is likely to cause major conflicts and to be politically unsustainable. Potential conflict is especially likely during implementation. This is a risk likely to overwhelm the potential benefits of the reform. The government has deemed wide participation necessary, but unaffordable. The policy draft has been disseminated via articles in newspapers, and some consultations with the chiefs have taken place.

¹¹⁸ de Soto 1993; Kawagoe 1999.

¹¹⁹ de Soto 2000.

¹²⁰ Deininger 2003.

¹²¹ Ibid.

¹²² Baker 2002.

3.9 Land reform: Conclusions

137. *Zambia does not have the capacity to implement a large-scale land reform without running great risks.* The benefit of such a reform, especially for smallholders, is questionable. Titling customary land would create conflict, and dispute-resolution mechanisms are generally unavailable. It will shift power to a centralized bureaucracy without accountability. The reform could endanger access to common-property and natural resources. It will undermine the traditional system, which provides an important safety-net and social stability. All of this is likely to harm the poor and the vulnerable.

138. *Give priority to improving land administration.* There are obvious problems with the current land distribution system. Simplified and transparent procedures, improved capacity and efficient land administration would be more productive first steps. The current lack of capacity increases insecurity and thus hampers development. The government should think of ways to open new lands. Improved collection of ownership payments needs to be combined with specific measures for the poor. Otherwise, there is a serious risk of limiting access to productive land.

139. *The main goal of a reform should be to give rights to actual occupiers.* Traditional tenure could be the least controversial and the cheapest solution. However, to overlook the discretion and inequities in the traditional system will be a mistake. If customary authorities are to be legally recognized, the chiefs' transparency and accountability needs to be increased. Some internal and external statutes, such as for entering into contracts or electing village committees, need to be designed. Such statutes could be a prerequisite for recognizing chiefly authority.

140. *Women's rights to inherit and own land should be a key focus.* An unwieldy 30% reservation that is difficult to implement is not enough. The government might consider different legal ways to recognize automatic spousal co-ownership, or at least inheritance. Other African countries can provide examples. Any such policy should involve the Gender and Development Division of the Cabinet Office, the various women's civil-society organizations or the Law Development Commission, to produce sustainable behavioral change in gender relations.

141. *An efficient dispute-resolution system is key to achieving security, efficiency and equity.* The Land Tribunal is inadequate, and the judiciary is slow and expensive. In contrast, the traditional system seems to be working reasonably well. It might be strengthened through formal recognition and by establishing procedures for appeal. It is important to ensure that absent or overlapping authority does not cause cases to sit unresolved.

142. *Land is not an isolated issue.* The lack of infrastructure is a major constraint to using land. So is the lack of inputs, tools and technology. Investment in infrastructure, especially in highly productive areas, will help to resolve a basket of problems. Unless small and medium farmers have inputs, tools and improved techniques, their productivity is unlikely to increase and their ability to cultivate land will be low.

143. *A large-scale land reform should not be attempted before the necessary implementation capacity is in place.* Policy design and political endorsement are just the beginning of the reform process. Implementation needs institutions, resources and a sense of ownership among the key stakeholders. The current reform proposal has none of these. When choosing between different options, one should clearly

distinguish between pro-growth and pro-poor policies. Land is a major asset and a major safety net; actions that might promote investment should not come at the expense of deepening poverty and exclusion. Since consequences are uncertain, it might be better to start with pilots to learn lessons and build implementation capacity before committing to nation-wide restructuring.

4. Fertilizer

144. According to the PRSP, the agricultural growth observed in the 1990s is “seriously threatened by the lowered competitiveness of the sector due to high production costs arising from the high prices of inputs, especially energy and fertilizer....”¹²³ When asked to rank the causes of poor crop yields, PPR respondents in all ten communities start with the same two: fertilizer is not available on loan, and fertilizer is always late or too expensive.¹²⁴ Ten years of participatory research in the 1990s found fertilizer to be the most commonly mentioned production constraint in every agricultural zone. Even maize “is now perceived a low value crop by farmers who can no longer afford the heavy dose of fertilizer which is necessary to make maize cropping productive enough to be profitable.” As a result, “in rural areas, the food problem is described as low production of maize, due to lack of fertilizers.”¹²⁵

145. Fertilizer is a popular good in high demand. The reasons are known, but the existing data are equivocal about the justifications. First, data support the perception that smallholders who use fertilizers have higher yields, but it is unclear whether fertilized maize is more profitable. The budgets built into the household model do not provide enough evidence for the profitability of fertilizer use at current market prices, except on large, more mechanized holdings. Generous subsidies have led to fertilizer overuse in the past.¹²⁶ Case studies show that the GRZ interventions distort market prices¹²⁷.

146. Second, given the labor constraint exacerbated by the lack of infrastructure, draft animals and equipment, people see fertilizer as key to problems such as climatic risk, a dearth productivity. However, fertilizer investments do not address the real problem, the labor constraint – both in terms of human labor (morbidity and mortality) and the lack of agricultural animals and technology) – discussed earlier in this paper. In addition, “Efforts to increase fertilizer use on small farms are plagued with lack of fundamental technology packages that are farmer tested to be profitable and risk-decreasing, especially in less-favorable agro-climatic zones; lack of technical/management skills and information on application rates and agronomic methods to increase efficiency and profitability of fertilizer use; high transport costs; underdeveloped credit markets; and risky output markets.”¹²⁸

147. Third, population growth and increased reliance on agriculture have fueled migration into less fertile areas where fertilizer has helped improve yields. Stakeholders claim that, even if conservation farming (CF) is used, given the soils, fertilizer is needed. Data show for example that using lime on soya beans increased yields by 17% and profits by \$46/ha. Lime increased maize yields by 13.5% and profits by \$76/ha. Lime, used with CF, increased groundnut yields by more than 75%.¹²⁹

¹²³ World Bank 2003a: 55.

¹²⁴ The informants in Kefa also mentioned inputs and fertilizer as key to increased productivity.

¹²⁵ Milimo et al 2002: 15.

¹²⁶ Govereh et al 2000.

¹²⁷ Mwape et al 2003.

¹²⁸ Ruiske et al 1997: 3.

¹²⁹ CFU 2003: 16.

4.1 Recent history: Liberalization and impacts

148. The government has traditionally used widely distributed, heavily subsidized fertilizers to attempt to improve smallholder income and food security. In recent years, budget constraints have forced the government to pare back its subsidies. Fertilizer imported for use in government distribution programs has declined from over 100,000 metric tons in the early 1990s to less than 40,000 tons in 2000.¹³⁰ Commercial sales have only recently started to close the gap left by the government's withdrawal. Since 1997, the GRZ has increasingly entered into agreements with several large private companies rather than import and distribute fertilizer directly. The chosen firms receive a risk-free commission for every ton of fertilizer imported and distributed. The company determines the price, while the GRZ determines the quantities, clients and destinations.

149. The price of fertilizer more than doubled in the 1990s.¹³¹ Farmers in all zones say that delivery has become less dependable, and that price increases affect the most vulnerable. For example, "The high cost of fertilizers means that most of the orphans' guardians fail to purchase it, resulting in little food production to feed the family, whose size is growing due to keeping orphans on top of their own children."¹³² Overall, fertilizer use fell by about half after liberalization and the subsidy cuts. The impacts of such reforms on smallholder producers and the rural poor have been widely and rigorously debated.¹³³ Some evidence suggests that the breakdown in maize marketing arrangements and rising fertilizer costs have led many smallholders—especially those in more remote areas—to shift to subsistence crops produced without purchased inputs.¹³⁴

150. Many stakeholders¹³⁵ believe that liberalization has hurt small- and medium-scale farmers.¹³⁶ While some perceive the problem as "premature" reforms, with no infrastructure, others blame unpredictable government interventions for disrupting the market. The subsidy schemes have been also criticized as politicized and corrupt.¹³⁷ A study done for the Food Security Project claims that government fertilizer recipients had incomes that were more than twice as high as non-recipients. Recipients were also five times more likely to have a civil-service employee in the household.

151. The maize/fertilizer price ration has not changed much since 1992.¹³⁸ This seems a contradiction; one plausible explanation is that looking at official maize prices is misleading, since rural farmers rarely receive market prices for their produce. Stakeholders and PPRs attest that the lack of infrastructure weakens farmers' bargaining power. Farmers cannot bid traders against one another; they usually have to take the first offer they get. In one location, for example, private traders purchased five-liter tins of maize for K4,500, while the market price was K7,500.¹³⁹ In addition, information on current market prices is rarely available, and barter prevails. With the end of the maize boards and the deteriorating market

¹³⁰ Food Security Research Project, May 2002 (GRZ 2002; Zulu et al 2002).

¹³¹ Howard and Mungoma 1996; Kherallah et al 2000; GRZ 2002.

¹³² Milimo et al 2003: 15.

¹³³ Limited data indicates that as fertilizer sales were decreasing, maize production was also decreasing.

¹³⁴ Milimo et al 2002; World Bank 2003a. The shift has been pronounced in Northern Province; see Francis et al 1997.

¹³⁵ The major stakeholders in regard to fertilizer are consumers, farmers, government, donors, cooperatives, fertilizer suppliers, and NGOs.

¹³⁶ Oxfam 2002; Milimo et al 2002.

¹³⁷ Smith et al 2000, for example, estimate that, in 1999/2000, some 5,000 of the 35,000 tons that flowed through GRZ programs were distributed illegally.

¹³⁸ In 1993, the national maize/fertilizer price ratio was .41 (Alwang and Siegel 1994). Recent data from CSO shows this ratio to be .51 in Eastern province, .42 in Northern Province and .53 in Southern Province.

¹³⁹ Milimo et al 2003. This was in Mkonchi, one of the better-connected areas.

infrastructure, farmers both sell less maize and accept more payment in kind—secondhand clothing, radios, bicycles, whatever the traders offer. The lack of cash makes fertilizer “relatively” more expensive.

152. The government has long grappled with the need to reform its fertilizer markets. “There are serious concerns over private traders’ willingness to deliver inputs on credit to resource-poor farmers. According to this view, government fertilizer and credit distribution are indispensable for promoting smallholder agricultural productivity and growth.”¹⁴⁰ Others contend that market privatization, with appropriate investments in infrastructure to lower transport costs and make remote areas more accessible, would benefit smallholder farmers more than subsidies.¹⁴¹ Timely access to fertilizer can be more important than its cost, and government-supplied inputs, although less expensive, have a history of arriving late.¹⁴²

153. In brief, the history of reform shows that:

- Transition to a private-sector-led input supply system has not been as rapid as anticipated
- Efforts at lowering transaction costs, for example through road construction, can take many years
- Policy implementation has been unequal in terms of location, farm size, and education of the household head.¹⁴³ Smallholders in remote areas and the most vulnerable seem to have suffered the most
- There has been little trust or cooperation between the private sector, donors and the government. Each tends to blame the others
- Targeting of the subsidy has been a problem.

4.2 Current policy

154. The government’s current approach has three components: Public production of fertilizer, distribution of free fertilizer through the Food Security Pack Program, and a 50% seed and fertilizer subsidy for hybrid maize production. This analysis focuses exclusively on the two distribution schemes.

4.2.1 *The Food Security Pack Program*¹⁴⁴

155. The food security pack consists of fertilizer and lime, and cereals, legumes, roots or tubers, depending on the agro-ecological zone. It is designed to optimize natural soil processes and to balance food-security requirements for resource-poor households. It is flexible, to take into account other livelihood activities that have a comparative advantage. The primary targets are vulnerable but viable farmers—FHHs, CHHs, orphanages, the disabled, farmers cultivating less than one hectare, and households affected by natural calamities and with terminally ill patients. The selection is made by a community committee, most often consisting of an extension worker, a local council representative,

¹⁴⁰ GRZ 2002: iii.

¹⁴¹ GRZ 2001.

¹⁴² The lack of timely inputs as a major constraint for smallholders has been highlighted in many studies. See SGS Zambia Ltd. 1999; Keyser et al 2001; Milimo et al 2002; Skonsberg, 2003.

¹⁴³ Seshamani 1998; GRZ 2002.

¹⁴⁴ The official name is Ministry of Community Development and Social Services Food Security Pack (MCDSS-FSP)

farmers, the chief, and an NGO representative. The scheme has been implemented by the NGO Program Against Malnutrition (PAM), selected through a competitive process. PAM claims that it is more efficient than a private provider and that it delivers where the private sector does not go. Other stakeholders challenge this claim and argue that the arrangement is not sustainable.

156. The Food Security Pack Program is three years old. Actual monetary allocation and coverage have varied from year to year. In 2002-03, 81.3% of the budgeted funds were disbursed, as opposed to just 12.2% the year before. In 2002-03, 128,500 small farming households benefited from the program.¹⁴⁵ The budget allocated to the scheme for 2003-04 is only enough to cover 55,000 beneficiaries. Over the three years, 313,600 have benefited out of 600,000 targeted. At an average household size of six, this means about 1,881,600 people.¹⁴⁶

157. To improve sustainability, the scheme has been altered such that the farmers who receive fertilizer are expected to repay 50% of the value after harvest in kind. Some of the collected output is stored for food security (the quantities are decided by the community and supported by facilitators); the rest is sold and the money used for public works. The aim is to end the “dependency” syndrome, to end misuse and to build community capacity to handle issues like food security. The program has reported loan repayment ranging from 55% to 77%, depending on the province. The program also works with farmers to improve wet-lands use,¹⁴⁷ to promote sustainable farming techniques (e.g., conservation farming) and to participate in the food-for-work program building rural infrastructure.

*4.2.2 The 50/50 Scheme*¹⁴⁸

158. The 50/50 scheme was introduced in 2002. The government subsidizes 50% of the price of fertilizer and some hybrid seeds. The subsidy is available for maize only. It provides eight bags per hectare to those with the capacity to farm between one and five hectares. To receive the subsidy, farmers have to make a 50% down payment. The second year, those same farmers are only eligible for a 25% subsidy.

159. District agricultural committees (DACs), consisting of private-sector, government and NGO representatives, identify candidates. Candidates should live in the community, be able to make the down payment and have no outstanding debts. The idea is to target small farmers with marketing potential. In 2002, the program intended to reach 240,000 farmers but, due to fiscal constraints, only reached half that number. The government contracts the supplier, Nitrogen Chemicals of Zambia (NCZ), to deliver to the district centers. Traders identified by the DACs move the seed and fertilizer from the district centers to depots; the Ministry of Agriculture pays for transport. The farmers present their down-payment receipt to collect their fertilizer.

160. The money collected from deposits in 2002 was used to pre-pay NCZ to start producing fertilizer for 2003. In 2003, the government postponed for a year the shift from a 50/50 subsidy to a 25/75 one.

¹⁴⁵ The government meant to target 240,000 households but, scaled back its deliveries after some donors withdrew support. Inputs were delivered to about another 70,000 households with donor money.

¹⁴⁶ Given the low graduation rates in the previous years, some beneficiaries have been in the program for two or three consecutive years. Due to the unfavorable rains in the 2001-02 season, only about 25% of the farmers graduated. In 2002-03 the rate is expected to be close to 70%.

¹⁴⁷ Less than 5% of the wetlands are used. Experience suggests huge unused potential: during the 2001/02 season, 10,6000 households in Western Province were helped to cultivate one lima each of maize or rice in the wetlands. The harvest played a critical role in reducing hunger in the lean season between December and February.

¹⁴⁸ The official name is Ministry of Agriculture and Cooperatives Fertilizer Support Programme (MACO-FSP). The description is based on official documents and interviews.

NCZ also received no credit for production. As of this writing, credit for the scheme for 2004 had not been apportioned.

161. According to the government's books, if recipients of the two distribution schemes in the 2002-03 season are added, they would total roughly 30% of small farmers.

4.3 Impact of the programs

4.3.1 Impact on access

162. The PPR and the Kefa study were done after the 2002-03 season distribution had taken place. Neither study provides evidence that distribution has been timely; both report problems with access and affordability. The Civil Society for Poverty Reduction (CSPR) monitoring study shows improvement of delivery timing in 2003. It is unclear how much of this improvement is a result of program improvement, as opposed to a few big fertilizer donations early in the year.¹⁴⁹

Box 1: Access to fertilizers – Story from the field

Margaret Phiri, 62: My (orphaned) grandchildren help me very much in the field, but the problem is fertilizer so that I can grow more food and cash crops. My field is big, more than 3 ha, which needs almost 16 bags of fertilizers, but I could only find 2 bags... to get a loan is a problem, but now the government has tried to give a chance to every farmer to buy fertilizer, but we have no money. And they have tried also to give us loan, but, sorry, they decided this too late and we cannot progress this year unless next year they give us a loan in time.

Source: Skjonsberg 2003: 11.

163. The focus group discussions with members of Chongwe Multipurpose Cooperative revealed that 40% of small farmers (40%) had failed to raise the 50% contribution needed to qualify for the 50/50 scheme.

164. According to Ministry of Agriculture staff and NGOs working in the field, the main reason for delay is the late and unpredictable disbursement of money by the Ministry of Finance. Though fertilizer was tendered early in the 2002-03 season, the money was not released until October. Some provinces and many remote locales received fertilizer late; some never received it.

4.3.2 Impact on gender

165. Stakeholders criticize the 50/50 scheme as disadvantageous for women. Women are less likely to have cash and to be members of decision-making committees. The Chongwe case study shows that the majority of those who fail to make the down payment are women¹⁵⁰. None of the implementation documents suggest any specific actions to overcome the inherent gender bias. The Food Security Packs also faces difficulties in including women in decision-making. As a result FHH are unlikely to receive subsidized fertilizer, although they are among the poorest and most vulnerable.¹⁵¹

¹⁴⁹ The Chinese government donated a large amount of fertilizer early in the year. The study currently underway will provide more data on government procurement and delivery.

¹⁵⁰ Mwape 2003.

¹⁵¹ Govereh et al 2000.

166. Quotas for female participation are obvious if not necessarily efficient solutions. Donor experience shows that lower education rates among rural women make their participation in executive committees difficult. Committee members often need to do accounts, fill applications and the like, and women rarely have the requisite skills. Investment in building women's capacity needs to be factored in.

167. Women are already responsible for most of the household's needs—water, food, childcare, nursing the sick. In addition, recent data show that agricultural tasks have become less gender-differentiated than in the past.¹⁵² Expecting women who already have added farming to their long list of responsibilities to participate in decision-making bodies may be unrealistic.

4.3.3 *Impact on crop choices*

168. Lack of fertilizer and water scarcity drives cropping choices. In Kefa, for example, cotton production has increased because cotton needs less fertilizer and water than other cash crops.¹⁵³ Where private companies distribute inputs, smallholders quickly adopt the available crops—cotton, tobacco, paprika. Such schemes can significantly improve the well-being of farmers.¹⁵⁴ In some communities, though, reliance on cash crops combined with lack of other inputs has undermined food security. In the event of drought or other crop failure, profits from cash cropping do not buy enough suddenly-expensive maize.

169. Not surprisingly, most smallholders focus on food security first. The rural-household model results show that the labor, cash and food security constraints, prevailing technologies, and low prices induce the optimizing smallholder to grow local maize, groundnuts and millet. Net household returns, using hand-hoe technology and cultivating 3.2 hectares, are about \$1.71. This is under fairly optimistic assumptions about yields. These results hold for most provinces. Northern province households spend relatively more on inputs but, because food prices are higher, see similar net returns.¹⁵⁵

170. Farmers have reduced their dependence on fertilizer by shifting away from hybrid maize and toward CF practices. Programs where farmers have used “conservation farming”¹⁵⁶ or indigenous crops have had some success. Yet most people have relied on fertilizer for years, and seem to not know what to do without it. The knowledge gained in the successful programs should be shared as widely as possible. Changing practices in this direction could both increase yields and help prevent excessive or uneconomic use of fertilizer.

4.3.4 *Impact on capacity building and mobilization*

171. The Food Security Pack has spurred the creation of CBOs. Program facilitators have supported community action and knowledge management. It is unrealistic to expect that, if the program is stopped, the private sector will fill the void. The program's results have depended on three main factors: the amount of government funds, its timely distribution, and the amount of rainfall.

¹⁵² Mwape 2003.

¹⁵³ Agents for the cotton companies also advance credit to farmers who plant cotton.

¹⁵⁴ Milimo et al 2003.

¹⁵⁵ Siegel and Alwang 2004.

¹⁵⁶ A 2001/2002 FAO survey in the Southern Province showed that, while some 70% of households experienced total crop failure during the 2001 drought, none of the farmers who had adopted conservation tillage (CT) did. Results from surveys by IFPRI/MSU and from on-station and on-farm trials by GART and CFU confirm that hoe-till CF practices can increase productivity dramatically. Available data shows that the same farmers can double their yields (from 1,500 to 3,000 kg/ha) when using CT on their plots. Of this increase, 1048 kg/ha was attributable to CT and 422 kg/ha to improved seeds and fertilizer. Early planting, rainwater harvesting and precise seeding also contributed. See CFU 2003:15. For more details on conservation farming, see the stakeholder analysis in Annex 3.

172. Similarly, the 50/50 scheme has breathed some new life into the dormant cooperative movement. By encouraging cooperatives and down payments, the 50/50 scheme attempts to encourage self-watch against fraud. Since many important decisions are made at the local or district level, the programs are seen as a step toward decentralized decision-making, itself seen as a way to improve targeting and limit abuse.

173. Promises, when not backed up with resources, have had a negative effect. In 2002-03 in Kefa, less than one sixth of the primary societies received the fertilizer they had been promised under the 50/50 scheme. The scheme had motivated the existing cooperatives, and more than 100 new Primary Societies had been formed or re-established, yet the euphoria ended with the news that fertilizer would never come. Kefans were not just disappointed; many now believe that the allocation decisions were politicized.

174. Major stakeholders claim that the 50/50 scheme has made subsidy abuse easier. While the PAM's food packs are too small for speculators to profit on them, the 50/50 scheme's larger disbursements to the cooperatives make "leakage" or "re-selling" tempting. Stories abound about ways to abuse both systems. NGOs in the field claim that, due to the lack of cash when fertilizer arrives, smallholders borrow from commercial farmers and repay them with cheap fertilizer and/or crops. The government calls this abuse of the subsidy, but many stakeholders call it a way to cope. The quantities supplied under the scheme are often more than small farmers need; thus selling some of it raises their income without hurting their productivity. Ironically, in this case attempts to quash fraud could actually hurt smallholders. This is not an argument for keeping the subsidy high, but rather an example of why we should consider indirect impacts.

4.3.5 *Impact on markets*

175. Private-sector representatives claim that the government and donor interventions crowd them out of the market. The case study of the Zambia Sugar Company (ZSC) demonstrated that private fertilizer suppliers are capable of supplying fertilizer at approximately 40% lower than the price the Government pays¹⁵⁷. However, at the current transport costs, private providers could not profitably supply distant areas and the poorest, even if import prices were lowered.

176. The food security pack supplies those rural dwellers who are mostly outside the cash economy. Private-sector representatives attest that the PAM "clients" would not be buying on the market. Mwape also finds that the targeted beneficiaries of the Food Security pack will not be able to buy fertilizer even at the lowest available at present cost.¹⁵⁸ The quantities distributed are small and re-sale, even where it occurs, does not affect demand and market prices. Thus, the food security pack is not a threat to private traders.

177. Smallholders who receive government fertilizer constantly complain that it is not enough, but they do not seem to buy additional fertilizer even where it is available. Data suggest that the demand for fertilizer is price elastic. At very low prices, hand-hoe households use almost 1000 kg of fertilizer to grow hybrid maize and fertilized millet. At 70% of current prices, the household grows less hybrid maize and uses fewer than 700 kg. At current prices, they use just over 300 kg; but the model suggests that even

¹⁵⁷ Mwape 2003.

¹⁵⁸ Ibid.

a slight price increase will reduce use to zero.¹⁵⁹ It is, therefore, probably the price of fertilizer, not the government's supplies, that explains the low demand.

178. Unlike the food security pack, the 50/50 scheme is criticized for targeting the "better off," thus diverting resources from the most vulnerable even as it diverts potential buyers from the market. Moreover, the scheme has been most active in Southern and Eastern provinces, where private-sector marketing channels are perceived as better developed.

179. Without the subsidy, prices will be highest in the poorest, most isolated areas. The state of infrastructure does not allow for much price reduction, especially in these areas. Every entity engaged in fertilizer distribution stresses the high transport costs. Mwape finds that transport costs contribute approximately 42% of the c.i.f. price of fertilizer in Kasama district.¹⁶⁰ The contribution of transport costs to the farm-gate price of fertilizer increases to approximately 46% by the time farmers are receiving urea fertilizer. The Cooperative League of the United States (CLUSA), for example, had to pay six cents per kilometer per ton on good roads and nine cents per kilometer per ton on bad roads, to distribute donated fertilizer in 2003. PAM pays eight cents per ton per km on the main roads (Lusaka to the district centers) and 40 cents per kilometer per ton on the provincial roads. Water transport is even more expensive, and slow. The bad roads also make deliveries harder to plan and make on time.

180. The bad roads, the lack of competing transport providers and the high prices of fuel¹⁶¹ all increase transport costs. It is unrealistic to expect any of these conditions to change significantly in the short run. Thus, it is difficult to think how private sector would be able to reduce costs as significantly as to reach out to the very poor and the poorest. Using the ZCS competitive prices¹⁶², if the Government subsidy decreases to 25%, the proportion of small-scale farmer income spent on fertilizer would be 35% under CF and 45% under conventional practices. In Western province, the proportion of income spent on fertilizer would be 41% under CF and 53% under conventional practices. The fluctuating performance of both these programs has not helped the government bridge the historic mistrust between it and the private sector. Delays and uncertainties have influenced prices, planning and response negatively. Case studies demonstrate that that fertilizer prices could be reduced through efficient procurement¹⁶³. This is heavily dependent on predictability of Government actions.

4.3.6 *Impact: Public-private mismatch*

181. The two schemes are seen as politicized and unpredictable. For instance, in the first year of the 50/50 scheme, there were heated parliamentary debates on the appropriateness of the scheme. A Cabinet member even promised publicly to abolish the down payment. The government was sending confusing signals to those farmers who were planning to participate. The private sector was "confused," as companies were already distributing on credit. Parliament was at loggerheads with the civil servants who resisted changing the scheme. In 2003, the Ministry of Agriculture worked closely with MPs and other ministries to avoid such confusion. Politics seems to interfere in the timing and distribution of both schemes.

¹⁵⁹ Siegel and Alwang 2004.

¹⁶⁰ Mwape 2003.

¹⁶¹ In 2003 the pump price of diesel in Zambia was approximately \$0.80 per liter compared to \$0.35 in South Africa.

¹⁶² Among the lowest available in 2003. See Mwape 2003.

¹⁶³ Through delivery via the least cost routes, minimization of inventory costs, competitive procurement and timely payment for fertilizer. Ibid.

182. Private companies argue that prices are high for two reasons. First, the government's bids are always late, and arrive at a point when the only firms selling are South African producers, selling at the peak of South Africa's growing season. Second, since the government's distribution plans are usually hazy until late in the year, private providers have to store their wares in Lusaka, where capacity is limited and prices are high. Providers prefer to import late in the season when storages facilities in the countryside are idle. The rushed arrangements for transport and distribution imply more unnecessary costs. In contrast, for products where the rules have been clear, such as tobacco, cotton and flowers, the private-sector response has been good.

183. An important issue to consider is the relative lack of competition in the fertilizer market, controlled by the government and five private providers. Various stakeholders have claimed that the companies keep prices artificially high. The government's efforts to restart parastatal fertilizer production can be seen as an attempt to deal with this issue.

184. Even if the private sector cannot fill the void left by the public sector completely, experience suggests it can to a great degree, and that smallholders can adapt to new market conditions. Large agricultural companies created smallholder outgrower and contract farming schemes in the 1990s. Lonhro, a cotton company, has the largest program, with some 100,000 participating farmers.¹⁶⁴ Other schemes have been set up for tobacco, paprika, sugarcane, and castor seed.¹⁶⁵ The schemes all provide inputs (recommended seed, fertilizer, agro-chemical packages), credit, extension and other help, and markets for outputs (often with set quality and price provisions). Many of these schemes are in danger of failing because the legal system does not protect or enforce the buyers' contracts. "Side selling" of outputs by smallholders, high rates of loan delinquency and non-payment are common. Buyers have grown weary of such contractual arrangements and are either looking for other ways to encourage production and buy crops, or pulling out of the business.¹⁶⁶

185. Representatives of companies whose schemes are profitable say that their schemes work because of the nature of the crop. Cotton and flowers have few buyers. Firms can thus sidestep the problem that there is no monitoring system or functioning legal mechanism to guarantee repayment; farmers cannot sell the crop to anyone else.

186. Stakeholders invariably mention the lack of repayment provisions and enforcing institutions as a barrier to credit providers (credit providers could organize their own collection systems, but the transaction costs would be prohibitively high). Lack of credit, in turn, chokes off private-sector development. "There has been a vacuum in agricultural finance since 1996. Small-scale farmers in particular have no access to credit and cannot borrow from commercial financial institutions. Recent measures have concentrated on resuscitating the moribund financial institutions but have been ad-hoc and without much success..."¹⁶⁷

¹⁶⁴ Boughton et al 2002.

¹⁶⁵ Copestake 1997; SGS Zambia Ltd. 1999; Keyser et al 2001.

¹⁶⁶ SGS Zambia Ltd. 1999; Keyser et al 2001.

¹⁶⁷ Keyser et al 2001: 19-21.

4.4 Fertilizers: Policy options for the future

187. The PRSP states that, “to provide policy clarity that appears to have been lacking in the last few years and avoid confusion regarding some aspects of the sector, government will issue within a year after the adoption of the PRSP clear policies and guidelines regarding agricultural input and output markets, mainly fertilizer and maize, as these appear to be areas where policy inconsistencies have been observed....”¹⁶⁸ No such policy exists.

188. Strategies to address the fertilizer problem in Zambia fall into four broad categories:

- i) Lowering the cost of fertilizer
- ii) Actions to improve access to lower-cost fertilizer
- iii) Actions to lessen dependence on fertilizer
- iv) Actions to improve targeting of any subsidized scheme.

189. Access to lower-cost fertilizer could be improved through improving lower transport costs competition among suppliers, consistency in government plans and provision.

190. Investment in infrastructure is a priority as it could solve a basket of problems. Investments could be prioritized according to the expected return of increased trade along various routes. The government could negotiate favorable terms for handling the Zambia fertilizer at shipping ports, through the Joint Permanent Commissions (JPCs).¹⁶⁹ The Zambian National Farmers’ Union (ZNFU) lobbies for further cost reductions through lower fuel taxes and more competition.

191. To fix the insecurity problems, Civil Society for Poverty Reduction (CSPR) suggests a 5-6 year written policy and budget-allocation plan, combined with a mechanism to hold government accountable. According to ZNFU, there is a need for a memorandum or policy that will allow companies to take legal action if the government fails to keep its commitments. The government’s policy decisions needs to be based on a consultative process. Improved communication among stakeholders will make scheduling and procurement easier and cheaper. The establishment of the Agricultural Consultative Forum (ACF) and the District Agriculture Committees (DACs) has already improved communication among the government, business and civil society.

192. While farmers have reduced their dependence on fertilizer by shifting away from hybrid maize and toward CF, there is more to be done. Examples of how to do this exist. The experience of MS-Zambia, CLUSA and others shows that farmers who are helped by extension workers or CBO facilitators usually move successfully to CF, indigenous crops and/or organic fertilizer. Most of the CBOs formed for such projects have continued functioning afterward.

193. Any innovative approach demands the support of extension workers. Yet thanks to budget constraints and HIV/AIDS, the services have collapsed.¹⁷⁰ MS-Zambia trains three or four extension workers per location because infection and morbidity rates are so high. This raises extension costs even further. Rebuilding the extension service is perhaps the most difficult piece in this puzzle.

¹⁶⁸ World Bank 2003a: 56.

¹⁶⁹ See Govereh et al 2000.

¹⁷⁰ The PPR (Milimo et al 2003) and the Kefa study (Skjonsberg 2003) show that the extension workers’ presence in the life of farmers is marginal.

194. Finally, several proposals have been made to move to self-targeting, for example through fertilizer-for-work arrangements. There are positive experiences of such arrangements, from the drought-relief programs of the early 1990s that could be drawn on.

4.5 Fertilizers: Conclusions

195. Despite subsidies, the most vulnerable have had little access to fertilizer. Those who do have access do not always use it in an economically rational way. Infrastructure is a prior constraint on both fertilizer costs and availability. Poor infrastructure keeps input prices high and limits market access. This keeps many farmers in the non-cash economy, which perpetuates their vulnerability and deepens their poverty and exclusion. While the efforts to improve the subsidy schemes have shown some results, they do not address this prior issue.

196. Suggested actions are as follows:

- Provide a clearly stated, written policy of intervention in the fertilizer market
- Promote increased competition in the fertilizer market
- Facilitate the recently formed out-grower schemes
- Improve targeting of subsidy schemes, with an emphasis on women
- Invest in research and extension services. Disseminate information on crops and cropping patterns that do not need fertilizer
- Promote community capacity for joint purchasing and knowledge dissemination
- Continue and expand public dialogue.

5. Rural Roads

197. All stakeholders and experts identify poor rural infrastructure as a major constraint to agricultural development and poverty reduction. The PPR points to roads as the major constraint to farm profitability in seven of twelve sites.¹⁷¹ Participants gave roads the highest priority. Only 18% of rural households are within five kilometers of an input market; more than 40% have to walk more than 16 kilometers.¹⁷² Poor infrastructure limits access to facilities and services and thus perpetuates poverty and exclusion. 49% of rural households are 6–16 km from health facilities; 15% are 6–16 km from a primary school.¹⁷³ The rural-household model shows that a 1% decrease in distance to market yields a 4% reduction in expenditures. Zambia's provision of major roads has improved over the last decade; the biggest obstacle today for the rural poor is the poor shape of feeder roads.

198. Two factors limit access: lack of roads and the poor quality of existing ones. The statistics on distance to roads or total length of the road network give an understanding only of the former. The PPR records that many roads are impassable during the rainy season and that entire communities are completely cut off. Minor roads are reported to be bad everywhere and some bridges are no longer passable. Kefa, next to a main road, is only 30 km from a larger town, but the bus ride takes an hour, compared to 30 minutes 25 years ago. The price has increased, and a minibus ride costs \$1.20—more than four visits to the health center or the grinding mill.¹⁷⁴

199. Communities rank market access today much worse than a decade ago.¹⁷⁵ Table 3 summarizes the distance to a number of services for the rural population; the poor are consistently more isolated. We can calculate the share of prices absorbed by transportation costs. A poor Zambian needs to travel, on average, more than 15 km to food markets to sell produce and more than 30 km to get inputs. In Kefa, close to the Lusaka-Malawi road, this trip takes about an hour. While the price of a bag of maize at the nearest mill is K25,000, the transport cost is K10,000 for the seller and K10,000 the bag itself. In other words, 80% of the price of the bag.

Table 4: Distance to services (in km) by poverty category

	Non-Poor	Poor	Bottom 30%	Total
Food Market	15.9	17.3	17.9	17.2
Post Office	24.9	26.6	26.2	26.1
Primary School	3.0	3.0	3.4	3.1
Secondary School	24.6	25.0	24.7	24.8
Health Clinic Facility	8.6	8.9	10.1	9.3
Police Station	24.2	26.0	25.8	25.5
Hammer Mill	4.8	5.5	7.0	5.9
Input Market	29.9	33.3	32.7	32.3
Bus Boat Taxi	8.1	8.4	9.6	8.8
Bank	45.6	47.9	47.4	47.2

Source: CSO 1996; 1998.

¹⁷¹ That is, the sites located away from main roads, where connecting roads have deteriorated.

¹⁷² Saasa with Carlsson 2002.

¹⁷³ CSO 1998.

¹⁷⁴ Skjonsberg 2003.

¹⁷⁵ Milimo et al 2002.

200. Lack of regular maintenance is the root cause of the deteriorating rural roads. While most communities recognize the importance of a good road network, they do not regard maintenance as their job. They see it as the job of the government and donors.¹⁷⁶ Maintenance is cheaper than repair, but funds are rarely available. Roads thus deteriorate completely; when they do, resources are diverted from other programs to repair it, or the road is completely abandoned.

5.1 Background

201. For the past ten years, PPR participants have been drawing causal flow diagrams that start with poor roads and pass through hunger and poverty, to malnutrition, ill-health, crime, prostitution and death, back to poverty.¹⁷⁷ Many studies¹⁷⁸ point to the problem of infrastructure in terms of social and economic development, efficiency and equity. The problems have been recognized for years, but solutions have been elusive. Policy decisions have been made, programs have been drafted, funds have been spent, but problems persist.

202. Donors and the government realize the importance of infrastructure investments, but improving efficiency has been difficult. Institutional and political-economy constraints have made some government interventions inefficient. Lack of coordination and inadequate funds and expertise has undermined donor efforts. The donors' role is crucial, because close to 70% of road construction is done with donor funds. Recently, community-based construction and maintenance has developed as an alternative. This alternative has advantages and disadvantages.

203. The key constraints that have blocked the improvement of the road network have been:

- Poor coordination among state agencies and donors
- Over-centralization
- Inconsistent use of community-based methods
- Inefficient resource use due to governance problems
- Inappropriate technologies.

5.2 Policy framework

The PRSP and the follow-up transport policy recognize the importance of feeder roads. The basic premise is to deliver rural roads through the "ROADSIP": a sector-wide framework established by the Government and coordinated with donors. The policy shifts responsibility from four ministries with overlapping authority to three public agencies with clearly stated mandates and accountability (see box 2).¹⁷⁹ Community/government partnerships are central to the ROADSIP framework.

¹⁷⁶ Milimo et al 2003: 22.

¹⁷⁷ Milimo et al 2002; 2003.

¹⁷⁸ Including the 1994 World Bank Poverty Assessment (World Bank 1994).

¹⁷⁹ The Cabinet and Parliament had not yet passed the three draft bills establishing these new agencies by the time of our main mission. Assessing the impact of the reforms, should be the focus of follow-up activities.

Box 2: Changing the institutional framework**Ministries currently responsible for roads:**

- Roads Department, Ministry of Works and Supply – trunk, main and district roads
- Ministry of Local Government and Housing – urban and feeder roads
- Ministry of Agriculture and Cooperatives – agriculture roads
- Ministry of Tourism and Environment and Natural Resources – game park roads

The three new agencies, introduced by the new transport policy:

- Road Development Agency, under the Ministry of Works and Supply – responsible for the road network
- National Road Fund Agency, to replace the National Roads Board – responsible for collection, disbursement, management and accounting of the National Road Fund (through Ministry of Finance to the Committee of Ministers)
- Road Transport and Safety Agency, under the Ministry of Communications and Transport – responsible for implementing policy on transport and safety

5.3 Provision in practice

204. There are a number of infrastructure initiatives that rely on community participation in needs identification, project implementation and management. Participation is encouraged to increase ownership. Examples include the Micro-Projects Unit (MPU) and ZAMSIF. Communities make a contribution in kind or in cash (15%, for ZAMSIF projects) and provide labor where available. The communities select project committees, half the members of which must be female, to help with project implementation. The communities manage road use and maintenance. Most such projects use labor-intensive technologies. Before road management is handed over to the community, there must be a trained maintenance committee in place. Studies show the effectiveness of this model.¹⁸⁰

205. NGOs often work as intermediaries in these projects, and have proven to be trustworthy and motivated partners for donors and government. Community contributions vary from 20 to 25% of project costs. In the case of the Program of Urban Self-Help (PUSH), community members are given food for their labor. PAM has supported more than 6,000 km in the last five years, using food-aid. One weakness of the food-for-work programs is that they have created the expectation that any labor will be rewarded (in contrast, much village maintenance has traditionally been communal work levied by the chief).

206. Access is often only improved in the short run, because institutional arrangements do not delineate maintenance responsibility. Efforts to promote community self-help maintenance have had limited success. Some of the causes are confusion between “feeder roads,” which fall under the responsibility of district councils and “community roads,” which fall under the responsibility of communities; the numerous, ad hoc, disjointed activities of multiple actors; the unclear legal framework for ownership of roads by non-public entities; and the expectation, carried over from traditional community maintenance, that all road work will be compensated. The new policy addresses these failures, and the provisions regarding ownership are under revision.

¹⁸⁰ Brushett 1999; Milimo et al 2003.

207. These constraints are particularly acute when the community has not been the driving force behind the initiative and when work begins before maintenance arrangements are ironed out. Many communities have constructed feeder roads without council involvement, in exchange for food aid from NGOs. When these roads start attracting traffic, it is unlikely that communities will be motivated to maintain them without compensation.¹⁸¹

208. Road maintenance demands coordinated efforts by different communities. This poses literal “free rider” problems. ROADSIP is trying to address this problem. It links communities to ZAMSIF for road rehabilitation and to the road fund for maintenance. When communities requests roads, roads engineers assists the contracting process, and so forth. The communities form associations to register ownership of the road.¹⁸² After the works are completed, the community can apply to the national roads fund for cost-sharing in maintenance (75% community, 25% road fund). The district engineer certifies the road condition on the annual application the community makes to the road fund.

209. In practice, community participation largely depends on the skills of the local authority, which usually does not have capacity to carry out the programs. Such authorities are understaffed and often unpaid. Often, other programs (such as ZAMSIF) provide funds for fuel and allowances so that district officials can do their jobs.

210. Implementation depends on the community’s capacity to organize, which often depends on the presence of a strong leader. Research shows that traditional leaders are more trusted than politicians. In some cases, MPs have delayed implementation of community projects by promising that the government will take care of the road and discouraging community contributions. In most cases, traditional leaders play a crucial and very positive role. There are nonetheless valid concerns that the projects give chiefs an opportunity to strengthen their power without challenging inequities. The quota established by ZAMSIF for female participation is an example of how the involvement of traditionally disadvantaged groups can be facilitated.

211. The private sector is involved mainly through labor, skills and machinery. The Small Scale Contractors Association offers skill in labor-intensive technology, but they are not available in all districts and do not have adequate resources. A unique arrangement is recorded in Mkonchi, where a commercial farmer agreed with the District Council to maintain the road linking the rich agricultural area of Mkonchi with the nearest market, 50 km away. Motorized users of the road pay K500 once a day each day that they use the road. The money goes to maintenance, and the road is in good condition. User think the fee is affordable, and the road helps keep poverty rates in Mkonchi lower than in other study areas.¹⁸³

5.4 Financing and comparative costs

212. The consistency of financing for road improvement is a major issue. The government has mobilized funds from various sources, but implementation has not followed the initial plan. For example, of 2,600 km of feeder roads for scheduled for improvement under ROADSIP I (1997-2001), only 25% were actually improved. At the same time, 409 km of gravel roads were done, though none were planned.

¹⁸¹ Brushett 1999.

¹⁸² The Zambia Roads Act is under revision to accommodate this arrangement.

¹⁸³ Milimo et al 2003.

This illustrates the lack of agreement on priorities. Funds seem often to be diverted to big roads; stakeholders claim that contractors prefer working on those more lucrative contracts.

213. Serious financial constraints produce further inconsistencies. For instance, between 1998 and 2002, \$115 million was allotted but only \$54.1 million was disbursed. As of December 31, 2002, about \$20 million remained in arrears, and outstanding plans had been abolished. Meanwhile, the fuel levy, which is supposed to fund roads improvement, has frequently been tapped for other purposes. Funding delays increase repair costs: routine maintenance costs about \$5.75 per square meter on average, while repairs cost \$12.36 and reconstruction costs \$24.09.¹⁸⁴ Higher costs mean less work that can be done elsewhere.

214. The costs of the different delivery modes vary. For instance, PUSH accessibility improvements cost almost twice as much per kilometer as ZAMSIF improvements (\$5,000 versus \$2,800). According to ROADSIP, road conditions and local context determine the cost of works; ROADSIP puts the costs of accessibility improvements between \$1142 and \$3869 per km, and full improvements between \$7,500 and \$19,892. Yet the price differential for PUSH is significant and deserves close attention.

215. Given the differences in costs and the many activities associated with the different community-based programs, it is difficult to establish a cost-efficiency standard. It is clear, however, that the added costs of community participation are small enough to be worth paying.

5.5 Impact of community-based programs

216. Where communities have been involved and supported, there have been improvements. While important locally, the impact has been small on a national scale.

217. The rural-household model shows that remoteness leads to less land under cultivation. Net returns are about 10% lower under the remoteness scenario, indicating significant welfare costs associated with remoteness.

218. Improved infrastructure may increase confidence in markets, which, over time, may reduce reliance on subsistence farming. According to the household model, removing the food-security constraint increases well-being by about 20% and makes production on less land area more feasible. Without the constraint, households produce higher-value crops. The combination of less remoteness and increased confidence in the market is associated with about a 25% increase in net returns. Improved infrastructure also contributes to diversified opportunities for income by providing easier access to different types of employment (where available) and access for employers to certain areas.

219. Communities involved in ranking their needs, making decisions, building and managing tend to see a project as their own. The greater the sense of ownership, the greater the commitment to the work and to future maintenance. Providing feeder roads without ownership has proven unsustainable, regardless of the source of funds.

¹⁸⁴ GRZ 2002.

220. The legal reforms to allow formal road ownership will likely strengthen the commitment to maintenance. However, common property rights for one group are often linked to the rights of others, and might be subject to dispute. For example, if “passage” fees are accepted, every community might charge fees for its own part of the road. Using the road might prove too expensive for the poorest. An accountability and dispute-resolution mechanism needs to be specified.

221. The mobilization of effort, the new CBOs and project units like the maintenance committees all provide new modes of community collaboration and decision-making. In the case of ZAMSIF, the required female participation has made a significant difference in the position of women in community life.¹⁸⁵

222. Despite occasional cases of abuse of funds, community committees and the community-level projects are seen as transparent and accountable. Though expense and progress reports are presented at community meetings, the capacity of community members to check the accounts is very low. In some cases, the perception of accountability is based on the fact that the ZAMSIF regional officer had checked the accounts and was satisfied. The perception of transparency and accountability does not extend to district and central government. The constant shifts in funding and the preference for investment in big roads are often attributed to corruption. There are anecdotal allegations of corruption at the district level. Road programs have had some positive gender impacts. Many programs mandate the inclusion of women in community-level project committees that manage funds. Project staff have noticed less corruption and better accountability when the treasurers are women. In a few cases there have also been spin-off effects from having women involved, though imposed from the outside. For instance, the assessment of the Chibombo Windmill Project was that the gender sensitization that took place at various points in the project cycle contributed to debate on such issues as the women’s voice in the community and in the households, especially regarding inheritance.

223. On the other hand, the food-for-work programs have been criticized because they attract more women than the cash-for-work programs, thus perpetuating income differentials. Interestingly, though, data show that food given to women has a greater impact on household food security than food given to men.

224. Several assessments of community-driven interventions show that project implementation builds local capacity for construction, simple financial management and organizational skills. PUSH, for example, trains community members as assistant technicians and gang leaders. The community calls upon them as needed.

5.6 Rural roads: Policy options and conclusions

225. The analysis supports the PRSP and ROADSIP commitment to greater use of community-based or community-driven programs. ZAMSIF’s collaboration with ROADSIP has shown that community work can be coordinated with government agencies. Impacts on livelihoods, social capital and gender balance have been positive. The main obstacle has been the different rules for community contribution and management that the different actors have followed. This needs to be addressed, in the way that ROADSIP is addressing donor-coordination issues for the larger roads. Another concern is the lack of

¹⁸⁵ Milimo et al 2002.

capacity of local authorities and the need to ensure clearer institutional arrangements and better training and financing for maintenance.

226. The emphasis on better donor and government coordination is a step in the right direction. Experience has shown, however, that it is not enough to restructure government agencies unless the basic incentive structure is changed and accountabilities clarified. The reforms try to do this, but pay too little attention to decentralizing capacity to ensure local implementation, responsiveness and accountability. The reform also needs to put in place incentives for agencies to disburse funds on time. Where legal change is needed (as with ownership) and where agreement on the principle has been established, the government should move quickly. Such changes will likely demand a functioning judicial system.

227. The importance of better infrastructure cannot be over-emphasized. It is expected to lower the costs of inputs, raise the relative prices of tradable goods (such as hybrid maize, sunflower and cotton), open new land and increase the price/use of land. Better infrastructure could weaken smallholders' economic rationale for only growing food for home consumption, and thus speed the conversion to commercial agriculture.

228. Finally, the reform proposals, even if they address the main issues, will only be a wish list if they are not secured by sustained government and donor commitment to implementation. The "implementation" focus is a reoccurring theme in this analysis, because Zambia's past is rich in reforms but poor in implementation.

6. Conclusion: Agriculture-led Poverty Reduction?

229. Most smallholders are stuck in a “low-level equilibrium.” To ensure food security, they allocate scarce labor and land to relatively low-value staple crops. Most production takes place using minimal technology, with low labor and land productivity and low returns. Given that input costs are high, output prices are low and supplies are unreliable, this is an economically rational strategy, especially for remote areas. Under such conditions, labor, cash/credit, inputs, technology and infrastructure constraints dominate land constraints.

230. Given current yields and single-season cropping of almost fully rain-fed agriculture, smallholder crops, while contributing to food security and supplementing family income, cannot be expected to reduce poverty very much. Nor do higher-value by themselves provide enough income to reduce poverty substantially. Crop budgets for commercially oriented emergent and large-scale farmers show more promise, but the initial investments and operating costs for such enterprises are substantial. This problem is exacerbated by the small surpluses generated by smallholder agriculture and the imperfections in rural credit systems. Outgrower schemes and contract farming have partly filled this void, but economic barriers to entry into higher-technology production processes persist. Imperfections in credit markets act as a brake to technology adoption, while high risks lead to conservative decision-making.

231. The importance of cash and credit availability is underlined by the relative success that participants in resettlement schemes have had in investing in improved technologies. Most participants start with some capital, which allows them to move ahead.¹⁸⁶ People who return to villages after working in urban areas seem to do better by applying their accumulated human and financial capital.

232. Traditional smallholder crops like local maize, groundnuts and cotton have lower input costs, but they also have lower returns to labor and land. Higher-value crops, such as paprika and tobacco, often have prohibitively high cash input and labor demands. In addition, prices for many crops fell or stagnated between 1994 and 2001, while input costs increased.

233. Paprika is often cited as a new smallholder crop that quickly proliferated, but the story illustrates the need for very large investment with very high risks (and prohibitive interest rates). Paprika was first introduced in the early 1990s and quickly developed into an important agricultural export. “Development...has only been possible because of the investment decisions made by a few entrepreneurs who identified a specific market potential and then went about making long-term investments to develop the production base needed....This has required substantial investments in farmer extension, input supply, marketing support, laboratory equipment, processing facilities, construction of rural depots and negotiation with potential buyers around the world.”¹⁸⁷ Unfortunately, between 1994- 2001 prices received for paprika declined as input costs increased and there were declining returns to labor despite improvements in average yields.

234. Commercial agricultural producers in Zambia attain higher yields than small-scale producers.¹⁸⁸ Higher returns combined with more hectares can produce a profitable enterprise. However, commercial farming requires knowledge of advanced farming techniques, business and financial-management skills. The combination of high outlays, the need to spread investments over large land areas and the technical

¹⁸⁶ SGS Zambia 1999.

¹⁸⁷ Keyser et al 2001: 39-40.

¹⁸⁸ Keyser 2002; Mwape 2003.

skill required to produce and market at a commercial level creates a substantial barrier to entry into commercial farming. Even a smaller-scale commercial maize farmer would need substantial resources: a basic, small-scale commercial farmer with a single 60-HP tractor and basic cultivation implements (plows, harrows, cultivators, fertilizer spreader and maize sheller) would incur more than \$100,000 in fixed investment.¹⁸⁹

235. Market and trade liberalization in Zambia happened in the absence of a strong private sector, appropriate incentive structures or infrastructure. Rural dwellers did not have the human and financial capital to quickly adapt to the changes; hence the negative impacts. It is important, though, to understand “how the poor...gain the capacity to engage with some strength in markets... [I]mportant contributing factors... include: access to capital, gaining new skills... building social and commercial networks, the existence of NGO ‘facilitators,’ and logistical support. Without attention to improving the capacity of poor people to engage in markets, the ideals of ‘pro-poor growth’ and ‘private sector partnership’ for development will remain more rhetorical gloss than reality.”¹⁹⁰

236. To achieve more sustainable farming systems for Zambian smallholders, Copestake, Ruiske et al and Saasa¹⁹¹ highlight the need for:

- Appropriate technologies and farming systems, suited to diverse agro-ecological conditions, for smallholders in remote and risky areas
- Adoption (and diffusion) of technological innovations which raise labor productivity
- Farming systems that are sustainable in terms of both natural resources and finances
- Stronger credit markets
- A wide range of profitable and risk-reducing technology packages, and skills and information to participate in domestic and international markets
- Improved community-level and local organizations that can test and adopt appropriate technologies and strengthen complementary assets, such as infrastructure and market access
- Reduced transport-related and other types of transactions costs
- Improved storage to assure timely application of inputs and to capture better prices for outputs
- Aggregated smallholder activities to reap economies of scale, to lower transaction costs and to improve bargaining power
- Improved links between smallholders and commercial input and output traders, including contract farming and outgrower schemes.

237. We are not very optimistic about the potential for agriculture-led, large-scale poverty reduction, especially in the short term, based on the prioritized reforms. A major transformation is required for agricultural potential to become agricultural reality. Large-scale investments are needed in research and extension, market and transport infrastructure, and capacity building for individual farmers and groups of farmers. Such investments, even if adequately resourced and implemented, will need time—years, perhaps

¹⁸⁹ Siegel and Alwang 2004.

¹⁹⁰ IDS 2003: 22-24.

¹⁹¹ Copestake 1997; Ruiske et al 1997; Saasa 2000.

decades—to produce change. Complimentary opportunities to stimulate non-agricultural economic activities in rural areas should be rigorously explored.

6.1 The way forward

238. The PRSP views development of the agricultural sector as a foundation for growth and poverty reduction, and suggests reforms. The problems it documents are not new, and most of the proposed reforms have been on the agenda for a decade. The constraints are still the same. What seems more important is implementation. In respect to the three analyzed reforms, this analysis finds infrastructure and labor-saving technologies to be a priority for poverty reduction. Strengthening the dispute-resolutions system, be it the judiciary or an alternative mechanism, seems to be a priority investment with cross-sector significance. Improving government capacity and introducing bottom-up accountability systems has to be seen as a prerequisite for the success of any more ambitious reform plan.

239. In the case of land, the recommendation is to focus on improving the existing state system—providing secure title and access to good dispute-resolution systems for the existing state land—before expanding it. If new infrastructure opens new land, that land could be brought under the state land system. Where titling makes economic sense, e.g. in highly productive areas with good infrastructure, pilot land transfers can be launched. Only after the system has proven its accountability and efficiency should it be extended to customary land. Meanwhile, traditional tenure can be given legal status, but only after immediate steps to address inequities in the traditional system are taken. The analysis outlines ways to do this that have been used in other countries. Building on experience and the available knowledge, Zambia can devise its own solution.

240. Regarding fertilizer, the most immediate step is to ensure a stable framework to allow the private sector to plan and operate securely. This can be done with a stroke of the pen, by committing to at least a two-to-three year program and introducing mechanisms to hold the government accountable for inconsistencies. If costs fall and especially if infrastructure, techniques and information are improved, then the subsidy can be phased out. Meanwhile, as the experience of the past year shows, the targeting and timeliness of the existing subsidy can be improved. This cannot happen without investment in community capacity-building and without promoting equity in participation in local decision-making.

241. For rural roads, the policy proposals regarding improved donor and government coordination are sound. The emphasis on community participation and ownership seems to have yielded good results so far. The missing elements are clarity on responsibilities, legal provisions to address issues of ownership and improved capacity of decentralized government agencies and local authorities. Infrastructure needs to be stressed since it is the key to a number of problems.

242. Overall, data and analysis show that any pro-poor development strategy would be better off capitalizing on local solutions, based on the strong traditions and the positive experiences with community-driven development. Rural communities are still somewhat passive, waiting for a development project or the state to take care of them. This dependency culture is observable in input delivery and infrastructure construction and maintenance. At the same time, communities have shown ability to adapt and resilience to hardship.

243. Improved research and extension, based on the assets that smallholders have and on the new policies, are needed. Extension should include a “basket of choices” that considers smallholder farming systems and off-farm employment opportunities. There is a need for technical assistance for smallholders to improve business skills and group formation. Targeted short-term interventions for rural poverty reduction and social protection, such as public works and soil-fertility improvements, are options.

244. The situation for poor Zambians has worsened in the past decade. Their human assets have eroded and they have little access to productive assets other than land. Growth prospects are low, so a trickle-down effect is hard to foresee. In this context, the PRSP proposes reforming the agricultural sector. While acknowledging agriculture’s untapped potential, it is important to recognize that Zambia’s agricultural sector faces structural problems and numerous risks. Realistic expectations are needed about what can be achieved in the future, especially with respect to transforming smallholder agriculture. Sustainable increases in agricultural productivity are likely to take decades. Short-term interventions to help smallholders will do more for poverty reduction. Simultaneous measures to support commercial farming might bring the needed economic impetus.

Annex 1: Structure of the Agricultural Sector

1. Most of Zambia's agricultural producers are smallholders, who use simple technologies and cultivation practices. They mainly grow rain-fed maize, groundnuts, roots and tubers, primarily for own consumption, on five or fewer hectares. Many have fewer than two hectares of cultivated, rain-fed land (see table 1).¹⁹² More commercially oriented, medium-sized ("emergent") farmers use animal traction and hybrid seed and fertilizer to produce rain-fed crops. Some attempts are being made to introduce micro-irrigation for emergent farmers. A few large-scale commercial producers and large-scale corporate operations exist, mostly along the line-of-rail. These producers use modern technologies, including irrigation, and are market-oriented. Many are also vertically integrated with crop-livestock operations and agro-processing.¹⁹³

Annex 1 - Table 1: Typology of agricultural producers in Zambia

	Approx. # of Producers	Approx Farm Size	Technology, Cultivation Practice	Market Orientation	Location	Major Constraints
Small-Scale Producers	800,000 hhs	< 5ha (with majority cultivating 2 or less ha of rain-fed land)	Hand hoe, minimal inputs, household labor	Staple foods, primarily home consumption	Entire country	Remoteness, seasonal labor constraints, lack of input and output markets
Emergent Farmers	50,000 hhs	5 - 20 ha	Oxen, hybrid seed and fertilizer, few with irrigation, mostly household labor	Staple foods and cash crops, primarily market orientation	Mostly line-of-rail (Central, Lusaka, Southern Provinces), some Eastern, Western Provinces	Seasonal labor constraints, lack of credit, weak market information
Large-Scale Commercial Farms	700 farms	50 - 150ha	Tractors, hybrid seed, fertilizer, some irrigation, modern mang., hired labor	Maize and cash crops	Mostly Central, Lusaka, Southern Provinces	High cost of credit, indebtedness
Large Corporate Operations	10 farms	1000+ ha	High mechanization, irrigation, modern mang., hired labor	Maize, cash crops, vertical integration	Mostly Central, Lusaka, Southern Provinces	Uncertain policy environment

Source: Adapted from World Bank 2003a: 66-67 and Francis et al 1997: 13.

¹⁹² It is estimated that only 40% of smallholders actually sold crops during the 1999-2000 season. See World Bank 2003a.

¹⁹³ Francis et al 1997; World Bank 2003a.

2. Zambian farmers can be differentiated by the types of crops they grow (table 2). Smallholders tend to produce low-value-to-weight food staples, including about 60% of the country's maize, 90% of its sorghum, 85% of its groundnuts and virtually all the cassava and other starchy staples. Smallholders also grow some higher-value cash crops, such as cotton, tobacco and paprika, and have some small livestock (mostly poultry and pigs for home consumption). The differentiation of crops and livestock by producer type is largely a function of the relatively high capital requirements for higher-value enterprises. Emergent and large scale producers generally have better access to markets and infrastructure. In addition, long-standing policy incentives (or disincentives) contribute to differentiation.

Annex 1 - Table 2: Estimated shares of Zambian national production by typology of producers

	Small-Scale	Emergent	Commercial	Corporate
Maize	60%	15%	25%	
Sorghum	90%	8%	2%	
Soybean	20%	10%	70%	
Wheat	5%		30%	45%
Groundnuts	85%	10%	5%	
Cotton	98%		2%	
Coffee	5%		45%	50%
Sugarcane	40%		60%	
Tobacco	60%		40%	
Milk	20%		30%	50%
Poultry	10%	20%	20%	50%

Source: World Bank 2003: 67.

3. Crop and livestock patterns are also influenced by agro-ecological zones and differences in agricultural potential. Zambia can be divided into three major agro-ecological zones (table 3). Region II, including most parts of Central, Southern, Eastern, and Lusaka Provinces, has the most favorable conditions for a diverse mix of crop and livestock enterprises, and comprises almost one-half of the rural population.

Annex 1 - Table 3: Major agro-ecological zones of Zambia

	Provinces Covered	% Share of Rural Population	Rainfall	Growing Season	Major Agricultural Activities	Soil Quality, Agricultural Potential	Livestock Potential
Region I	Southern parts of Western and Southern Province	48%	600-800mm	80-120 days	Maize limited by rainfall. Sorghum, millet, sunflower, cassava, cotton, tobacco. Livestock limited by tse-tse fly.	Soils: Shallow Sands Ag Potential: Poor	Limited by existence of tse-tse fly and trypanosomiasis

Annex 1 - Table 3 (cont.): Major agro-ecological zones of Zambia

	Provinces Covered	% Share of Rural Population	Rainfall	Growing Season	Major Agricultural Activities	Soil Quality, Agricultural Potential	Livestock Potential
Region II	Most parts of Central, Eastern, Lusaka, Southern Provinces	43%	800-1000mm	100-140 days	Maize, groundnuts, and wide range of crops and livestock.	Soils: Moderately leached sandy loams Ag Potential: Good	Absence of tse-tse fly and trypanosomiasis
Region III	Northern, Luapala, Copperbelt, Northwestern Provinces	9%	1100-1700mm	120-150 days	Maize, bananas, coffee, tea. Limited by high acid soils.	Leached and acidic sands Ag Potential: Moderate	Limited by existence of tse-tse fly and trypanosomiasis

Sources: Francis et al 1997: 5; Copestake 1997: 9; Milimo et al 2002: 11; World Bank 2003a: 68; Soil Quality and Agricultural Potential, Livestock Potential from Copestake 1997: 9.

4. Public policies influence smallholder production patterns. In the past, price and institutional policies made maize production economically viable. Subsidized maize and fertilizer prices, pan-territorial pricing, maize-biased public agricultural research, extension and credit systems contributed to maize being grown in areas not particularly suited for it. Farmers came to depend on maize as a staple food, and on government institutions for marketing, extension and credit. "Producer subsidies for fertilizer led to the extension of maize cultivation into unsuitable areas which increased vulnerability to drought, distorted factor prices, and biased the direction of research away from high value export crops to staples with low profitability."¹⁹⁴ On the other hand, smallholders have some good reasons to grow maize, primarily for home consumption. "The low value to weight ratio of maize adds to the profitability of producing for own or local consumption, while at the same time restricting opportunities for sale to urban consumers with good market access."¹⁹⁵

¹⁹⁴ Deininger and Olinto 2000: 3.

¹⁹⁵ Copestake 1997: 24.

Annex 2: Methodology – PSIA Specific Research

1. The Zambia PSIA was conceived as a follow-up to the PRSP. A series of stakeholder consultations and numerous economic analysis all pointed to agriculture as the only foreseeable alternative to growth. The consultations regarding the focus of the PSIA took place during one of the worst food- shortages the country has suffered in recent years.
2. As the PRSP, the government and different stakeholders were suggesting numerous agricultural reforms, the first part of the work was to identify the key agricultural reforms to be analyzed for their poverty and social impacts. The criteria used was the “utmost” impact as well as the likelihood to be started. The “jury” to decide was the Zambian government, civil society, private sector, trade unions, academics and donors.
3. The PSIA team conducted series of focus groups, structured, semi-structured and open-ended interviews. The stakeholders consulted were from more than 15 ministries and agencies, 12 “big business” representatives, 11 local NGOs, 5 international NGOs, 2 Trade Unions representing the commercial farmers and the small-scale farmers, representatives of the traditional authorities, representatives of more than 11 donor organizations and 5 research and academic institutions. At this initial stage, most of the interviews were done with senior government officials, private sector executives and trade union leaders. Focus groups were used within organizations, combining technical and operational staff at similar level. This was done to avoid the influence of hierarchy. Field-based and Lusaka-based staff was interviewed separately as in most cases Lusaka based staff was senior and more likely to be politically connected. In the international organizations, international and local staff was often interviewed separately.
4. In parallel with the consultations, the team conducted a literature review. Key part of the review was the analysis of 10 years of PPR work in the same 6 communities already completed by Zambian academics. The data was at the group level but very meaningful as a starting point. Simultaneously, the team used the latest available household survey data to rerun a reduced form model of rural household expenditures to test the correlates with poverty. Based on all of the above, the team decided to analyze three reforms: land tenure, fertilizer subsidies and rural infrastructure.
5. When designing the methodology the team had in mind not only the robustness and adequacy of tools but the following: i) the data needed to complement existing data so that it can be used to trace historic patterns and for purposes beyond the PSIA; ii) the methods had to be such as to maximize local capacity, to help build it where necessary and to be used in the country in the future; iii) the approach had to allow maximum stakeholder participation. Thus, the team decided to commission a PPR to up-date the already existing body of data, while extending the coverage for the purposes of the PSIA. The team also commissioned an anthropological survey of Kefa village to up-date an existing set of longitudinal anthropological data (ethnographies). Both studies were to inform the up-date of an existing rural household model designed specifically for Zambia and using existing quantitative data. All of the studies were to inform the institutional, stakeholder, scenario and risk analysis. Interviews and focus groups with key stakeholders were planned for the time when the research was completed and the model up-dated. Meanwhile, the literature review continued.
6. The rural household model to be used for the analysis is a stylized model of smallholder rural households that was prepared for the 1994 Zambia Poverty Assessment. The model is a single-period

linear-programming model¹⁹⁶ that evaluates smallholder cropping patterns. The model combines census data (information on household composition, land holdings, economic activities), socio-anthropological data (time-use, gender distribution of labor for different activities, etc.), with farm budgets for different cropping activities to generate the economic variables of interest (crop production patterns, household income, shadow prices of land and labor). The model only considers incomes from on-farm agricultural activities.¹⁹⁷ As much has changed in Zambia since 1994, the model needed to be updated.

7. To understand the different changes,¹⁹⁸ to avoid the limitations of the available quantitative data and to better understand community, intra-household and gender dynamics, the qualitative research needed to be completed first. The PPR started before the raining season and run through it to provide information for time use, assets distribution, division of labor, access to markets and information, etc. The research covered communities in all the different agro-zones, ethnic groups, with different access to markets, roads and livelihoods. The separate in-debt study of a village where previous anthropological data was available provided great details regarding cropping patterns, local markets, time and infrastructure use, direct and indirect costs.

8. Using the PPR and anthropological data, the authors of the rural household model up-dated the scenarios and then used available quantitative data (census, household survey, agricultural statistics and other) to evaluate impacts of proposed policy changes on income, labor allocation, fertilizer use, land use, productivity and welfare. This informed the analysis of the potential direct and indirect impacts. The PPR and data collected purposefully at the national level, informed the institutional and stakeholder analysis. The PSIA team collaborated with other studies conducted at the same time and benefited from an IFC investment climate survey, poverty mapping done for the PVA (Poverty and Vulnerability Assessment) and a beneficiary assessment done for ZAMSIF (Zambia Social Investment Fund)

9. The data collected and the results of the model provided a useful blend of information. The qualitative data provided a detailed understanding of the situation in different parts of rural Zambia while the household model provided quantitative estimates of the benefits and costs, of stylized changes in policies, investments, technologies and cultivation practices on “representative” rural households’ incomes, labor allocation, input use and land cultivated. The contribution to the policy dialogue was significant, as the data was accessible for all stakeholders. The process of data- collection itself rose awareness and public debate. The participation of NGO representatives and civil servants in the PPR increased ownership and credibility. The stakeholders consulted initially and especially, the stakeholders key to the three analyzed reforms were revisited and provided with opportunities to comment and participate in formulating the policy recommendations.

Participatory Poverty Research

10. The PPR was conducted by the Participatory Assessment Group (PAG) with the participation of researchers from Civil-Society Organizations (CSOs). The purpose of combining academics,

¹⁹⁶ The household model analyzes a single 12-month period, disaggregated by monthly activities.

¹⁹⁷ Most smallholder households derive a majority of their income from agriculture activities.

¹⁹⁸ Some of these changes stem from policy reforms through the 1990s, while others stem from external factors such as conditions in international markets, recurring drought and the HIV/AIDS epidemic. As a result, farmers have adopted new technologies and production processes at different rates.

researchers and CSOs was to build capacity in CSOs to monitor and evaluate development interventions and policies. The combination also resulted in greater ownership of the process and results and facilitated acceptance by the communities. The PPR approach was selected because there was a wealth of extant PPR data, collected over the past 10 years for various purposes.¹⁹⁹ This allowed complete reliance on in-country capacity.

Sampling

11. The PPR covered ten different study sites purposively selected to represent a variety of agro-ecological zones (low/high rainfall and type of soils), modes of livelihoods (cotton, maize, cassava), levels of access to markets, services and infrastructure, and cultural/ethnic groups (the five most numerous linguistic groups) with their different systems of social organization. Six of the ten study sites had been studied several times between 1990-1999 using Participatory Poverty Assessment (PPA) and Participatory Poverty Monitoring (PPM), conducted in four consecutive years following the PPA by PAG. Therefore, comparative data at the group level is available.

Research methods

12. The team employed a mix of the following research methods:

- Focus-group discussions
- Semi-structured interviews
- Participatory mapping:
 - ✓ Social mapping (one group of men, one of women and one of youth per site)
 - ✓ Resource mapping (one group of men, one of women and one of youth per site)
 - ✓ Well-being/wealth ranking (two groups of men, women and of youth)
 - ✓ Flow charts: two groups of men, of women and of youth
 - ✓ Institutional analysis matrices: two groups of each age and gender category
 - ✓ Trend analysis matrices: two groups of each category
 - ✓ Gender analysis: one group of each category
 - ✓ Daily activity calendars: one group of each category.

The PPR team

13. The team had 14 researchers, seven men and seven women. Seven came from PAG and seven from CSOs. Research was done in five different local languages. The researchers have backgrounds in several disciplines. Two additional researchers (an educator and a lawyer) were contracted to do a literature review.

Timing

14. Most of the data collection took place between October 2002 and January 2003.

¹⁹⁹ See Milimo et al 2002.

Study of Kefa village

15. The study focuses on major constraints and opportunities for improved rural livelihoods among peasant farmers²⁰⁰ in one village. It is based on information collected in January 2003 by the Norwegian anthropologist Else Skjonsberg, whose work in Kefa dates back 25 years. Skjonsberg's in-depth descriptions of Kefa at different times over the past two decades provide a wealth of trend data and detailed descriptions of processes and beliefs that define social and institutional structures, decision-making, exclusions, productivity and so on.

16. The analysis focuses on the issues raised in the Terms of Reference quoted below. The study provides information on social and hierarchical structures, cultivation patterns and animal husbandry practices. Special emphasis is placed on infrastructure, agricultural inputs and the potential and constraints of rural development. It includes demographic data for 2003, allowing comparison to previous data from 1994 and 1977/78. Skjonsberg relied entirely on local researchers, who she had trained over the past 20 years.

Annex 2 – Box 1: Study of Kefa village – Focus questions in terms of reference

<p>1)</p>	<p>Access to markets</p> <ul style="list-style-type: none"> • What information do villagers have about prices and other market conditions, how could this be improved • If private traders are active, why? At what prices? • Prospect for community-organization? • What are the key constraints to market access?
<p>2)</p>	<p>Fertilizers</p> <ul style="list-style-type: none"> • Access to and cost of fertilizers (by type of farmers) • Use of fertilizers (by type of farmers)
<p>3)</p>	<p>Infrastructure:</p> <ul style="list-style-type: none"> • Access to rural roads • Access and cost of irrigation (by income or other relevant category) • Access to water (by income or other relevant category) • Storage facilities (by income or other relevant category) • Access to and cost of power (by income or other relevant category) • What are the major constraints, how would communities see these constraints being overcome, is there community capacity to organize for construction, operation and maintenance?
<p>4)</p>	<p>Land reform</p> <ul style="list-style-type: none"> • Titling and ownership – assessment of the traditional system in terms of equity of land distribution, efficiency and sustainability of land use and possible constraints of traditional system in giving farmers access to agricultural services or credit

²⁰⁰ The terms “peasant” and “farmer” are used somewhat indiscriminately here, and also the in-between category “peasant farmer.” While the peasant cultivates primarily for family consumption, the farmer does so for sale and uses his resources where the expected returns are the most optimal. Only about 1-2% of Kefans are “farmers” in this sense. The term “peasant farmer” indicates the willingness to become a farmer; the challenge is to get started.

Annex 2 – Box 1 (cont.): Study of Kefa village – Focus questions in terms of reference

<p>4)</p>	<p>Land reform</p> <ul style="list-style-type: none"> • The impact of land titles on access to credits, access to water facilities and equity/efficiency of land use and access • The impact of land-titling on inter-group dynamics • Promotion of commercial agriculture (for example outgrower schemes) and the impact on small-holders.
<p>5)</p>	<p>Local institutions</p> <ul style="list-style-type: none"> • What institutions (religious, state, NGOs, community, local authorities, private sector, traditional leaders) do community-members know about, or belong to? Which ones do they trust, have confidence in? Why? Which ones are seen to be accountable to community members and efficient in delivering services, products? • How are community members able to influence decision making by districts or provinces? • Institutional capacity at the community level to demand and/or organize service delivery for agriculture.
<p>6)</p>	<p>Impacts of HIV/AIDS</p> <ul style="list-style-type: none"> • and other disease on agricultural productivity, labor availability and livelihoods. • What coping strategies have proven effective. • What is the impact specifically on women? • How are communities dealing with orphans and widows without support?

Fertilizer road map

17. The study mapped the stakeholders, analysed institutional and organizational structures and arrangements and followed the distribution of fertilizer and the price formation. The stakeholders mapping and institutional analysis of fertilizer were done using secondary data and information and data obtained through discussions, focus-groups, interviews and case studies with key stakeholders in the agriculture sector. In order to quickly review the informal and formal practices several short studies were commissioned: Government fertilizer roadmap, private fertilizer supplier roadmap, and three case studies of alternative pricing and purchasing arrangements (cooperative- Chongwe Multipurpose Cooperative, private corporate farm- Zambia Sugar Company, and a Donor- FAO-FSP). The methods used were group discussions, review of records, interviews with employees/ members.

Rural household model

18. As part of the World Bank's 1994 Zambia Poverty Assessment, Paul Siegel and Jeffrey Alwang helped build a stylized household model to better understand the economic opportunities and constraints

of “representative” smallholder farmer households.²⁰¹ This model was used to measure the impacts of changes in policies, investments, technologies and cultivation practices on households’ well-being.²⁰² The household model, a single-period²⁰³ linear programming model, combines census data (information on household composition, land holdings, economic activities), socio-anthropological data (time-use studies of household members, and gender distribution of labor for different activities), with farm budgets for different cropping activities to generate economic variables of interest (crop production patterns, household income, shadow prices of land and labor). The model only considers incomes from on-farm agricultural activities.²⁰⁴

19. A strength and weakness of the model is its simplicity, and the attempt to approximate reality based on a broad mix of household level data. Considering the lack of consistent data on Zambian agriculture, the household model can provide useful insights for micro-level analysis that includes simulations based on changing the model parameters. It can provide quantitative estimates of the benefits and costs (to the household) of stylized changes in policies, investments, technologies and cultivation practices.

20. The model maximizes returns to fixed assets, subject to the technologies and constraints. The “production technologies” are basically crop budgets, as summarized below. The constraints apply to land, monthly labor, food security and cash. The model includes the effects of household composition, access to land, technology and inputs, and patterns of seasonality as they affect the availability of household labour and household food security. Several scenarios of the model are analysed. These scenarios provide insights into smallholder behaviour in response to changes in the economic and physical environment.

21. The model simplifies many of the complex interactions that characterize household decision-making. Its strength is its ability to quantify the relative importance of the constraints facing the households. Such quantification will assist in prioritizing policies designed to alleviate these constraints and reduce poverty. A simple linear programming (LP) model is used to model household behavior. By articulating the objectives, resource requirements and resource constraints facing representative rural households, we predict their choices (crop production activities) and outcomes (measured by net value of production and other performance indicators). For the PSIA-specific analysis, a deterministic single-period LP model was used. All of the models’ parameters are assumed fixed for the duration of the planning horizon, which is a single year. All farm-level decisions are assumed to be made at the beginning of the planning horizon, when land-preparation and planting decisions take place. Crop activities are divided into monthly periods to reflect the seasonality of crop production and labor requirements.

22. The model is highly stylized and, as such, does not exactly represent any single farming system. It incorporates the critical elements of a spectrum of farming systems prevalent in several provinces. The

²⁰¹ Defining a “representative” Zambian smallholder household for purposes of the model requires simplifications. Regions do not necessarily correspond to agro-ecological zones. Access to infrastructure, notably the “line-of-rail,” is an important determinant of production decisions. Most smallholders in medium rainfall areas primarily grow maize and groundnuts, along with other crops. The model analysis focuses on the line-of-rail provinces—Southern, Eastern and Northern.

²⁰² See Alwang and Siegel 1994; Alwang, Siegel and Jorgensen 1996. See Siegel and Alwang 2004 for the updated rural household model used to inform the Zambia PSIA.

²⁰³ The household model analyzes a single 12-month period, disaggregated by monthly activities.

²⁰⁴ Most smallholder households derive a majority of their income from agriculture activities. In addition, some work as laborers on others’ farms. There is a general lack of non-farm non-agricultural activities in rural Zambia (SGS Zambia, Ltd. 1999; Milimo et al 2003; Skonsberg 2003).

data used are based on agro-ecological areas where local maize and groundnuts (and sorghum) are the major food staples. The model is thus loosely representative of smallholder households found in medium-rainfall areas of Southern, Central, Eastern, Lusaka and Copperbelt provinces.²⁰⁵ The data used are generalizations taken from various sources, and in some cases extrapolations.

23. The LP model can be expressed as the maximization of the net value of production from $j=1, \dots, n$ activities purchasing $i=1, \dots, q$ inputs for these activities, such that

$$\max V = \sum_{j=1}^n p_j X_j - \sum_{j=1}^n \sum_{i=1}^q c_{ij} X_j$$

subject to the requirements and constraints for $i=1, \dots, m$ resources:

$$\sum_{j=1}^n a_{ij} X_j \leq b_i,$$

and subject to the non-negativity constraint :

$$X_j \geq 0$$

where:

V = the net value of farm production (gross value of production minus cost of purchased inputs),

X_j = the level of the j th farm activity (e.g., hectares of hybrid maize using a given technology and management practice), and n is the number of possible activities under consideration (e.g., different crops using different technologies and management practices),

p_j = the per hectare value from the j th farm output (price times yield),

c_{ij} = the cost of the i th purchased input used for 1 hectare of production of the j th activity,

a_{ij} = the quantity of i th resource (e.g., labor) required for one hectare of the j th activity,

b_i = the amount of the i th resource available to the farm (e.g., the household's total labor endowment for a given month).

24. The solution of the LP model provides information on how changes in resource endowments, b_i , change the net value of production, V . If a resource constraint is binding, then it is possible to calculate the *shadow price* of that scarce resource. The shadow price indicates the value to the household of an

²⁰⁵ This excludes the high-rainfall Northern, Luapula, Northwestern provinces, and low-rainfall Western province, where cassava and millet are the major food staples.

additional unit of the scarce resource. Thus, the shadow price can be considered as the price the household would be willing to pay for an extra unit of a scarce resource, such as labor.

25. By examining the shadow prices of the binding constraints, considerable insight can be gained about the relative importance of different constraints. For example, by creating separate male and female labor inputs (a_{ij}) into production of farm outputs (X_j), the relative importance of each type of labor can be examined. By separating labor requirements by month, the value of labor inputs during different times of the year can be computed. The model thus quantifies the value of each constraint. The general structure of the LP model is presented in table 1.

Annex 2 - Table 1: Rural household model - Aggregated linear programming tableau

Constraints	Activities		Right-hand Side
	Crop Production ($X_1 - X_n$)	Input Purchases	
Objective	p...p	-c...-c	Maximize
Labor Use	A...A		$\leq b$
Land	A...A		Unconstrained
Input Transfers	1...1	-1...-1	≤ 0

Notes: The letters represent matrices of coefficients presented earlier. A positive sign indicates that the activity adds to the row; negative signs signify subtractions.

Objective function of the household

26. It is assumed that two objectives guide smallholders' decision-making. First, household behavior is governed by a safety-first rule that compels households to produce a minimum amount of staple foods. Second, it is assumed that, having met the first objective, the household maximizes net income from crop production activities. The safety-first rule (i.e., the food-security objective) is modeled as a constraint. That is, a constraint is used to "force" the household to produce enough staple food to feed itself before other crop activities can be selected to maximize the net value of production. Resource allocation decisions are also subject to seasonal labor constraints. In addition, household decisions depend on the level of available technology, the amount of available cash and land, and the availability of input and output markets (i.e., timeliness of delivery).

Types of Households

27. For the model it is assumed that traditional households use hand-hoe technology and emergent households use oxen technology. It is thus possible to use the model to isolate differences in crop mix, labor allocation, etc. based on use of hand-hoe or oxen technology. Oxen can be used by emergent households during land preparation, weeding, harvest, and for post-harvest activities. It is common practice in Zambia for several households to share use of oxen. Households with access to oxen are assumed to contribute labor, upkeep costs of the oxen, and upkeep cost of oxen-related equipment. Oxen activities are thus distinguished from hand-hoe activities by their higher returns, different labor requirements, and higher input costs. It is assumed that both types of households depend solely on household labor for crop production. The household labor endowment for crop production depends on the composition of the household (i.e., the number of adult equivalent workers), and the gender division of labor within the household.

Investors' road map

28. This document, prepared by the IFC,²⁰⁶ includes a chapter providing a general update on the land situation in Zambia and a detailed analysis of current policies, institutional regulations, and laws and procedures for allocating land.²⁰⁷ The findings are based on relevant published documents, analysis of current legislation, and interviews with the heads and staff of the relevant institutions and with the private sector.

²⁰⁶ IFC 2003.

²⁰⁷ Land acquisition, general land planning and development, and construction permits, including utility connections.

Annex 3: Stakeholder Analysis of Land Reform

State Entities

1. **The President.** According to the constitution, all land is vested in the president. The current land policy draft keeps the status quo, while NGOs suggests transferring all land to the state or the people of Zambia. As it is, the proposed increased state involvement translates into extended powers for the president. The president's land-related powers are formal, but the president's office will not likely give them up without political justification. Most importantly, "formal" powers can still be used at any time.

2. The President has to think about the next election. Land reform could be politically explosive. It will affect the chiefs, who have influence over voting patterns in most communities. The president and his party's position may be based on political, not economic or social, implications. The president has no interest in controversial and politically damaging debates; he will likely support the shift to increased state land ownership but will not lead the process. The president also enforces party discipline on the Members of Parliament (MPs). Without his backing, no controversial reform is likely to pass, without major modifications (as happened in 1995).

3. President Mwanawasa has been popular. His personal commitment to the anti-corruption campaign and his speech at the opening of Parliament (regarding the economy, HIV/AIDS etc.) have erased the image of him as a partner of former President Chiluba.

4. The attitude/support to the land and fertilizer policies would also depend on the Presidents' stands on issues such as privatization, etc. His popularity and the donor perception are important. Thus, land and fertilizer policies might be used for image-building, or as a trade-off with the donors.

5. **Ministry of Lands.** The Ministry of Lands is the collective author of the new draft policy and the primary government agency concerned with land matters. It is divided into four departments: Human Resources and Administration, Lands, Survey and Lands, and Deeds Registry. The Ministry collects the land rents and the titling tax. Thus any increase in titles, taxes and rents will raise its revenues. Increases in titled land will also increase the Ministry's responsibilities and influence. The Investors Road Map offers a detailed description of the Ministry. The relevant findings are referenced in the text.²⁰⁸

6. **Lands Tribunal.** The Lands Tribunal, a statutory body of the Ministry of Lands, was introduced by the 1995 Land Act to give those who could not afford the courts access to a dispute-resolution mechanism. It was also intended to take pressure off the overburdened judicial system. There are two ways of filing a case with the tribunal: present documentation to the Lusaka office in person, or write a letter. The tribunal has no phone line.

7. The Land Tribunal was supposed to have a branch in each district center. At present it only has offices in Lusaka, and it only sits when a reasonable number of cases have piled up. Last year the Tribunal looked at about ninety cases. It traveled only once last year, to hear a few cases in Livingstone. There is no data on the average time between filing and resolution, but even the tribunal's staff says the process is slow. One reason seems to be the nature of tribunal appointments: tribunal members are part-

²⁰⁸ See IFC 2003.

time appointees chosen by the land minister based on their public status. Only the tribunal chairman is a qualified judge. The other members often find it challenging to handle cases along with their other duties.

8. Members of the PSIA team sat through a day of hearings. All five of the cases presented that day were filed by Lusaka-based companies and individuals. The land ministry's representative was late for the first two. All of the cases were rescheduled due to lack of relevant documents.

9. The new draft policy stresses the importance of the tribunal²⁰⁹ and promises to invest in strengthening and expanding it. As an institution, the tribunal will benefit from such investments. The tribunal's staff has little influence over policymaking, but its appointed members do. The members read the policy proposal differently, based partly on their parallel roles as businessmen, chiefs and the like. One chief, for example, refused to sit on the tribunal after the draft policy was published. In other words, the tribunal cannot be analyzed as a unitary actor.

10. It is commonly recognized that the tribunal is very important and needs more money and influence. However, it will be hard for the tribunal staff to take on any more responsibilities without more resources. They are overloaded already.

11. The Land Tribunal will be key to implementing the draft policy if it is approved. Therefore, it is important to evaluate the tribunal's rules of appointment and responsibilities. At present, these are vague.

12. **The Judiciary.** The Judiciary has adjudicatory independence and administrative autonomy. The court structure is as follows:

- The Supreme Court, which has 9 judges including the chief justice (one judge is attached to the Yugoslavian War Crime Tribunal and another doubles as Chairperson of the Human Rights Commission). The chief justice is appointed by the President and confirmed by Parliament.
- The High Court, which has 30 judges. Currently, seven seats are empty.
- The Industrial Relations Court, which has five judges; two seats are empty.
- Sixty-five Magisterial Districts, staffed by 150 magistrates.
- About 440 Local Courts, staffed by 900 local-courts justices.

13. The Supreme Court is the final court of appeal. In an attempt to cut litigation time, in April 2000 the judiciary established a Commercial List, which has a four-judge panel headed by a then-acting judge from the Supreme Court.

14. The constitution does not provide for the removal of judges for failure to exercise impartiality, or for contravention of the constitution and the law. The only legal provisions regarding the removal of judges are Article 98 (3): "Any judge of the High Court or Supreme Court may be removed from office by the President, subject to ratification by Parliament" and Article 98 (2): "Any judge of the High Court or Supreme Court may be removed from office for poor health, madness or drunkenness and disorderly behavior." This means that judges, appointed by the president, cannot be dismissed by their peers.

15. The judiciary's reputation was tarnished by many allegations of political bias during the last elections. Judges have occasionally been involved in scandals. Zambia's judges have no code of conduct

²⁰⁹ The tribunal's registrar helped write the Draft Land Policy.

(the Law Association of Zambia has laid down a code of conduct for all lawyers in the country and penalizes those who go against its ethics).

16. In 1997, Zambia's judiciary was hit by its worst shortage of judges since independence. Some cases had to be adjourned for over a year before they could be heard. A survey at the Judicial Department in Lusaka found that magistrates had to be sent around the country's 61 districts to help clear the backlog of cases. Only 14 of the country's 30 High Court judgeships were filled. Only three of the ten principle magistrates were available to hear cases. There were only six serving senior resident magistrates, while 15 were required. Nine resident magistrates were hearing cases instead of the necessary 48.

17. Following the crisis, in July 1997, then-President Chiluba increased judges' annual salaries by 207%. Following on these increases, junior court officials who did not benefit from this increase demanded their own "fair deal."

18. The more powers and duties transferred to the Land Tribunal, the more powers and budgets would be taken away from the courts. The GRZ might want to evaluate the effectiveness of building a new body rather than improving an existing one (say, by providing special access for the poor). Since the judiciary is cross-sectorally important, any such strengthening would have wider benefits. There is also the importance of professionalism in dispute resolution, especially where valuable assets like land are at stake.

19. Most of the top judicial positions are presidential appointments. They are likely to support the direction the president takes, and they can influence him. More details are provided in the institutional analysis section.

20. **The Office of the Vice-President.** The Office of the Vice-President identifies land for resettlement schemes, through the Department of Resettlement. Such schemes usually involve civil-service retirees and other urban residents who need land. The schemes have long been used as compensation and retirement packages. Recently, there have been resettlement schemes for retrenched miners. Resettlement land is distributed with state title. These schemes are important "safety-nets" and "benefit packages" as well as a very powerful "political" tool. The vice-president is also perceived²¹⁰ as favorably disposed to accommodating fleeing Zimbabwean farmers. Recent statements coming from the vice-president's office have made stakeholders believe that the vice-president is in favor of the suggested reform.

21. **The Ministry of Legal Affairs.** The Ministry of Legal Affairs gives legal advice to the Ministry of Lands. It also attends to legal cases where the Ministry of Lands is a party, and attends to all agreements entered into by the Ministry of Land with other parties.

22. According to interviews, the draft policy was "home-grown" in the Ministry of Land. The Ministry of Legal Affairs is likely to have a lot of work to do if state land is increased. It will need more capacity to do this. The Ministry is likely to support the judicial profession's interests in any reform negotiations.

23. **The Ministry of Local Government and Housing.** The Ministry assesses land for resettlement and industrial and commercial development. The Ministry's Department of Physical Planning and

²¹⁰ Stakeholders claim that the perception is based on public statements.

Housing works with local authorities to prepare structural and regional plans for town and rural development.

24. The Ministry is likely to support increased state powers. If titling happens on a large scale, they will have a very difficult job dealing with illegal settlers, urban slums and other conflicts.

25. **City, Municipal and District Councils.** Such councils recommend land applications. The Districts are entitled to money from the Land Development Fund to open up new land. At present, the money is paid directly to the council, which few see as transparent. The fund is often under-used; according to the Ministry of Land, low district capacity is the reason.

26. The district and city councils are political bodies. They are entitled to collect some but not many taxes. GTZ experts on local government (in a project in Southern province) claim that the council's capacity is very low. The councils are interested in a decentralized land administration. They are likely to favor increased state ownership. Their position could be influenced by the positions of the central government and the president.

27. **The Land Husbandry Section of the Ministry of Agriculture and Cooperatives.** The Land Husbandry Section is responsible for identifying, planning, demarcating and recommending land for agriculture.

28. The more land that is available for distribution, the greater the Ministry's powers will be. The Ministry's staff also thinks that the increased security associated with titling will be good for agricultural investment and productivity. The civil servants are likely to support increased state-ownership and titling.

29. The Minister of agriculture is new, and known as a friend of the president from his legal career. He is likely to support expansion of state land, but his decision might be influenced by the party's stand or the president's position.

30. **The Ministry of Works and Supply.** The Ministry is responsible for the administration and maintenance of all government property. The proposed reforms do not seem to affect the Ministry's current engagement in land-related affairs. The Ministry will probably be neutral toward the reform.

31. **The Investment Centre of the Ministry of Commerce, Trade and Industry.** The Investment Centre identifies suitable land for various development projects. More state land implies greater power and returns for the center. As with the Ministry of Agriculture and Co-operatives, the Ministry's staff sees titling security as good for investment and development. It will likely support expanding state lands.

32. **The Ministry of Tourism, Environment and Natural Resources.** The Ministry helps entrepreneurs identify land suitable for tourism, including land in game-management areas. Its position is similar to that of the Ministry of Agriculture, Food and Fisheries. The draft policy is vague on rights of use, rights of passage and natural-resource management.

33. **The Ministry of Finance.** The Ministry of Finance is a very central stakeholder as it will have to finance the reform. It also oversees the Land Development Fund and the revenues from rent and fee collection. Half the annual revenue from ground rents go to the Land Development Fund, to be used by the districts to open up new land. The fund is under-used, and the Ministry of Finance uses the money for other expenditures. Finance and land officials blame the under-use on the low capacity in the districts,

which do not know how to access the funds to which they are entitled. The Ministry does not seem to think that it has any responsibility for building district capacity to access funds. The Ministry is likely to support the new policy, especially since it commits to improved rent collection and increased land taxes and fees, which mean more revenues.

34. **The Parliament.** The Parliament will need to vote on the new policy and the relevant legislative amendments. In 1995, land reform was dropped because it was hugely unpopular. The chiefs resisted it, and it is commonly believed that winning elections in Zambia requires the chiefs' support. The current Parliament is the first "multi-party" Parliament in Zambia's recent history. Most of the members are new to politics, and more than 70% are new to Parliament. The idea of a strong and influential Parliament is itself new. Party discipline is weak and based less on ideology than on personal loyalties and career expectations. The fact that most party leaders are not in Parliament weakens the discipline. Moreover, committee members are selected by the speaker and not by the party chairman. Big business does not seem to play a big role in Parliament.²¹¹

35. **The Zambia Law Development Commission.** The Law Development Commission is responsible for the review, reform, systematic development, simplification and organization of the law. Given the importance of clarity of legal provisions and their compatibility with custom, the commission has a key role to play in paving the road for smooth implementation.

36. **The Police.** Any enforcement of rights inevitably demands some sort of institutional arrangements. At present, the relevant state body is the police force. Increases in disputes, especially in the absence of a functioning dispute-resolution system, will probably require police involvement. Even those disputes that the courts do resolve often require police enforcement. The police suffer from the same problem as every state entity: lack of funds. The police are understaffed and underpaid.²¹² It is unclear how the police will handle increased demand. In some villages the police have been hesitant to go against the will of the chief, for fear of expulsion or bewitchment.

The Private Sector

37. **Commercial farmers.** The box below sets out the stance of the commercial farmers on the issues at hand.

²¹¹ Most of the information on Parliament and the media was collected with the help of the Friedrich Naumann Stiftung office in Zambia. The foundation is an independent observer of the democratic and political process in many countries. DFID and GTZ experts and independent political observers also contributed to these sections.

²¹² The force has also been ravaged by HIV/AIDS. Unfortunately, data on public-employee infection is not disaggregated by agency.

Annex 3 – Box 1: Commercial farmers’ view on land reform

To avoid future misallocation of land, stringent but realistic selection criteria should be adopted:

- Need to re-introduce absolute ownership: “freehold”
- Limit establishment of new farm settlement blocks while so much State land is underutilized
- An economic ground rent related to farm potential should be collected and made available to the local community for conservation measures.

Immediate steps:

- Improved utilization of the state owned land
- A survey of all titled land, recording ownership, total areas, potential arable areas with present production areas
- Details of management skills of the owners, and their interest in production or possible sub-leasing all or part of their farms to other active farmers.
- All state land rents should be related to the farms’ potential bearing in mind²¹³:
 - ✓ Normal Rainfall
 - ✓ Presence of above ground and underground water
 - ✓ Communications- roads, telephones, etc,
 - ✓ Availability of ZESCO supply
 - ✓ Distance to market
 - ✓ Suitability for specific crops
 - ✓ Any limitation such as Tsetse Fly
 - ✓ Physical security of Persons and Property
 - ✓ Rents should be high enough to ensure that the land is utilized.
 - ✓ Rental income after recovery cost should not go to the Central Government but to a Land Development Fund
 - ✓ Rent collection needs to improve.

Source: Official statement to the ACF, and interviews.

38. **Small-scale farmers.** This group is not homogeneous. Some small-scale farmers, who own valuable land and have marketing potential, might benefit from the reform. Their land could be used as collateral (presuming a credit market emerges). Meanwhile, many smallholders on the bottom of the scale will only see their expenditures rise if they have to formalize their land rights. In many cases, the titling costs and rents will not be covered by the increased value of the land. Titling does not automatically mean security; unless the necessary institutional arrangements are in place, titling will just mean additional costs. Thus we can expect support from this group to be polarized.

39. **Surveyors.** There are only 24 privately certified surveyors and 15 surveyors in the Ministry of Lands. There have been cases where foreign private investors have “imported” surveyors because the local ones either were busy or did not have the right equipment to do the job quickly or well. The surveyors have very little influence on decision-making, but their role during implementation will be pivotal. The lack of surveyors could easily halt any reform. That they are so few and so crucial necessitates some sort of accountability system. As titling is their business, the surveyors have nothing to lose and potentially much to gain.

²¹³ At present rents are related to farm size.

40. **Lawyers.** Titling and other land transactions are a lucrative business for lawyers. Private lawyers seem to have been closely involved with the drafting of the legislation. In general, the lawyers in Zambia pride themselves on being well-organized and well-represented in government. They are likely to have high influence and high, articulate interest.²¹⁴

41. **Foreign investors.** Foreign investors will certainly benefit if the dual system is ended, if the procedures are clear and if titles offer security. They are also likely to prefer the eliminating the existing restrictions on land ownership by foreign nationals.

42. **Commercial banks.** The banks that provide credit to big farmers and profitable smallholders, or that are interested in doing so, will be interested in improved security, be it through titling or just through recognition of the lease agreement with the chief. They will also be interested in the inheritance provisions. The banks will be most affected by the enforcement rights and the dispute-resolution mechanisms. If they have to “police” the collaterals by themselves, their transaction costs may be too high. Since disputed land cannot be traded, the banks will only consider land valuable if disputes can be quickly settled. The banks will also need a reliable registry to be able to issue credits against land. In general, commercial banks have a strong interest in change, but little interest in the insecurity that change might provoke. They also have a very strong interest in improving dispute-resolution mechanisms.

Donors

43. **USAID.** USAID helped sponsor the 1993-1995 consultations and seminars on land reform. Highly-positioned civil servants in the Ministry of Agriculture told us that USAID supports titling. Yet the representative from USAID with whom the CEM mission met denied any involvement in the land debate. As a study done by Michigan State University with the support of USAID calls for expanded state ownership, the agency might be inclined to support such a view.

44. **The World Bank/The International Monetary Fund.** The World Bank and the IMF are indirectly affected, since land is a major determinant of productivity and growth. The institutions could become directly involved if the government asks for a loan to update the registry and cadastre, or a technical assistance loan to improve institutional capacity. This is likely, given the government’s scarce resources and heavy dependence on the IMF for budget decisions.

45. **The Department for International Development (DFID)/ GTZ.** The bilaterals’ level of engagement and ability to influence the reform will depend on their financial commitment. DFID commissioned a consultancy to study the impacts of the suggested land reform. The consultants pointed at the unclarities and risks. It is likely that DFID will use this study and the report delivered by the independent consultant to decide regarding support of the reform.

²¹⁴ The information from this section is based on individual interviews with lawyers from private companies and the government.

Civil Society

46. **The Chiefs.** The day after the draft land policy was issued, one chief sitting on the Land tribunal resigned from her appointment in protest. She made the decision after consultations with other chiefs. As previously stated, the chiefs will be net losers from the reform. The chiefs resisted changes in 1995, and the ongoing consultations also show their numerous concerns. Both their interest and their influence on the design and implementation of the reform are huge; they are the single most formidable social group aligned against the reform.

47. **Landless households.** The draft policy does not propose to fix most existing inequities in the system. Where women and vulnerable groups are concerned, the proposal makes a commitment of improved access; it is unclear how this will be ensured. The landless are not a homogenous, organized or politically represented group. Despite their strong interest, they have almost no influence on policymaking or implementation. Since the issue is sensitive, the NGOs and the media are likely to stand for them.

48. **Herders.** The policy draft ignores the rights of use and passage. Herders are not organized and have no political voice. If the legislation is passed without clarities and provisions, they might be net losers.

49. **FHHs and CHHs.** FHHs and CHHs have very strong interest in change, very little power to influence decision making and are not satisfied by the current proposal. Traditional law generally discriminates against FHHs and CHHs where land distribution is concerned. No stakeholder has ever claimed that gender equity exists. This has major economic and social implications.

50. The current draft does not adequately address their needs, but both groups are unlikely to be politically vocal and to influence decision-making. However, the combined efforts of NGOs and donors might force the government to revise the relevant procedures.

51. **Minority ethnic groups.** Given the existing inequalities in access to land for minority groups, they will be losers in any reform that preserves the status quo, introduces new fees and taxes or makes access and security of land even more difficult. Politically, though, they have little power.

52. **Zambia National Farmers Union (ZNFU).** The ZNFU claims that they represent both commercial and small-scale farmers. However, they are perceived as a professional organization representing mostly commercial farmers. They have also proven their influence on the government: the ZNFU managed to convince the government to remove the VAT on agricultural products and to remove import duties on agricultural equipment.

53. The ZNFU's chairman and directing committee were critical of the 1995 Land Act. ZNFU representatives say that most problems with the current system are due to bureaucratic bottlenecks, unclear procedures and the non-functioning dispute-resolution system. They are not convinced that titling will solve these problems. In the government goes forward with the plan, they will insist on decentralizing the procedure.

54. The provisions regarding the right to "re-entry," which are vague, are a major source of insecurity. The provisions regarding the Land Tribunal are also perceived as vague and easy to abuse.

Local NGOs

55. **Land Alliance.** In individual interviews, staff made the following statements: i) agreement with the Chiefs must be reached; ii) affirmative action is necessary; and iii) there is a need to “develop” the people first and the development of land will follow.

56. **The Participatory Ecological Land Use Management Association (PELAM).** The organization lobbies on behalf of the small-holders but has been formed only recently. The influence it has over decision-making seems less than the ZNFU.

57. **The Jesuit Centre for Theological Reflection (JCTR).** The JCTR holds that insecurity of land is inherent in the present traditional and state systems. They are also concerned that the Chiefs could be easily influenced to favor wealthy foreign investors and commercial farmers on the expense of those already living on the land.

58. The following NGOs and others agreed on a formal common statement regarding land, as summarized in the box below:

- *National Association for Peasant and Small-scale farmers (NAPSFF)*
- *Women for Change (WFC)*
- *Zambia Alliance of Women (ZAW)*
- *Zambia Association for Research and Development (ZARD)*
- *Catholic Commission for Justice and Peace*

Annex 3 – Box 2: Summary of NGO statement on land reform

Procedural concerns:

There is discontent with the GRZ plan to hold consultations only on the district level. The NGOs stress the importance of wide consultations and participation and are starting to organize consultations on the community level.

Content-related concerns:

- Practice shows much evidence that the President and the Land Commissioner have abused their rights. They suggest that the land is vested in the State not the President.
- The agents who act on behalf of the Commissioner of land should start at the community/ village level.
- The land administration system is discredited.
- The draft policy does not address gender issues in a satisfactory way. The NGOs suggests that 50% of the land should be distributed to women, and for the quota for vulnerable groups to be separate. They argue that women produce most of the food and therefore, access to land for women is key for food security.
- Where security is concerned the Draft Land Policy does not contribute at all to improved security
- Titles are costly and have implications in terms of rents, taxes, fees, etc. Therefore, the law has to protect the poor on customary land.
- The current land administration is too cumbersome and costly to the average poor. Procedures need to be clarified and simplified.
- The current land dispute resolution system is inadequate. There is a need for investment and improvement, especially of the Land Tribunal.

International NGOs

59. **Oxfam.** Oxfam has proposed an action plan for the Copperbelt district. They want to establish two “land advisory centers” staffed by them, one in each district, to work with the district councils and small groups of squatters to formalize their land tenure status. The initiative would aim to influence policies at district level, and build up case histories of required legal and administrative procedures for application elsewhere and the reform of the 1995 Lands Act. Overall, Oxfam staff thinks that: i) corruption within government is a major issue; ii) women and vulnerable groups are disadvantaged and affirmative action is necessary; and iii) infrastructure is the key determinant of land value.

60. **Media.** Newspapers in Zambia have limited reach. They are relatively expensive and hard to distribute. The most popular and accessible medium is radio. The quasi-government-controlled Communications Authority has only granted licenses to one national commercial radio station (Radio Phoenix in Lusaka), one international Christian radio station (Radio Christian Voice), and several church-owned regional radio stations. Trinity Broadcasting Network, a national Christian station, has been granted the only television license.

61. There are several national and community radio stations. There are two government-owned newspapers: *The Times* and *The Daily Mail*. The two reach most of the literate population. *The Post* is the only privately-owned newspaper. It is owned by a group of private businessmen, but is not a big business. It has relatively little coverage and depends on advertisements. The government has stated that it has no intentions to privatize the Zambia National Broadcasting Corporation (ZNBC), Zambia News Agency (ZANA), Zambia Information Services (ZIS), the *Times* or the *Daily Mail*. Public media are highly subsidized.

62. The country's main independent media groups are the Zambia Independent Media Association (ZIMA) and the Zambia chapter of the Media Institute of Southern Africa (MISA). The Press Association of Zambia (PAZA) and the Zambia Media Women Association (ZAMWA) pressure the government to abolish laws undermining freedom of expression. According to MISA, the state-owned media is still used to suppress dissenting views. Zambia has more than 26 laws with clauses that limit or obstruct the free flow of information and ideas. Media-unfriendly laws include the State Security Act of 1969.

63. The media will have an important role in any large-scale land reform and the accompanying sensitization campaign. It must explain to people the changes, the implications and their rights. It will also help shape opinions of the reform, by determining whose views get covered and how. However, its influence is not unlimited. Numerous studies (especially those done with respect to HIV/AIDS) show that chiefs, priests, and other such figures have much more authority in shaping beliefs and behaviors than the press or the radio do.

64. Journalism in Zambia is not among the most respected or well-paid professions, which results in varying-quality reporting and a near absence of analytical material. *The Times* and *The Daily Mail* are likely to provide an open forum for the government policy. *The Daily Mail* will likely provide some space for the voices of NGOs and the opposition. In general, media representatives are interested in the reform. Any change, especially a controversial one, is news, and news means funds and influence.

Stakeholders and their support for/influence on reforms:

65. The analysis of the government's proposal was already introduced in the main text. Figure 1 below again assigns each of the analyzed stakeholders a symbol used in the analysis.

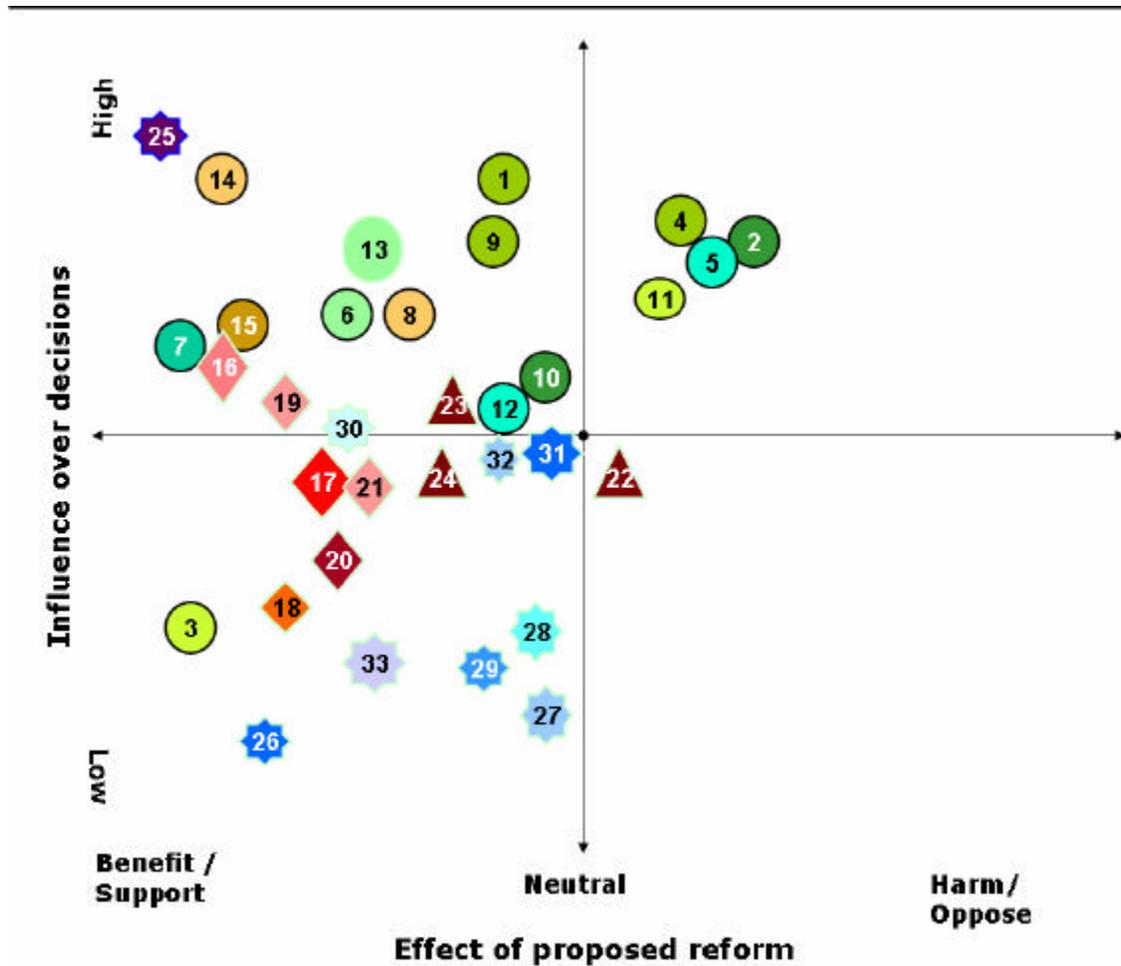
Annex 3 – Figure 1: Land reform – Key stakeholders

Government and State agencies	Private Sector	Civil Society
1 The President	16 Commercial farmers	25 The Chiefs
2 Ministry of Land	17 Small scale farmers	26 Landless
3 Lands Tribunal	18 Surveyors	27 Herders
4 The Judiciary	19 Lawyers	28 FHHs , CHHs
5 Office of the Vice -President	20 Foreign Investors	29 Minority Ethnic Groups
6 Ministry of Legal Affair	21 Commercial Banks	30 Zambia National Farmers Union (ZNFU)
7 Ministry of Local Government and Housing	Donors	31 Local NGOs
8 The City, Municipal and District Councils	22 USAID	32 International NGOs
9 Ministry of Agriculture and Cooperatives	23 WB/IMF	33 Media
10 Ministry of Works and Supply	24 DFID, GTZ, EU	
11 Ministry of Commerce, Trade and Industry		
12 Ministry of Tourism, Environment and Natural Resources		
13 Ministry of Finance		
14 Parliament		
15 The Police Force/ Ministry of the Interior		

66. The next two diagrams below show stakeholder positions in the hypothetical case of a mixed reform. Figure 2 shows analysis for a reform with the first four of the following six elements, while Figure 3 shows analysis for a reform with all six:

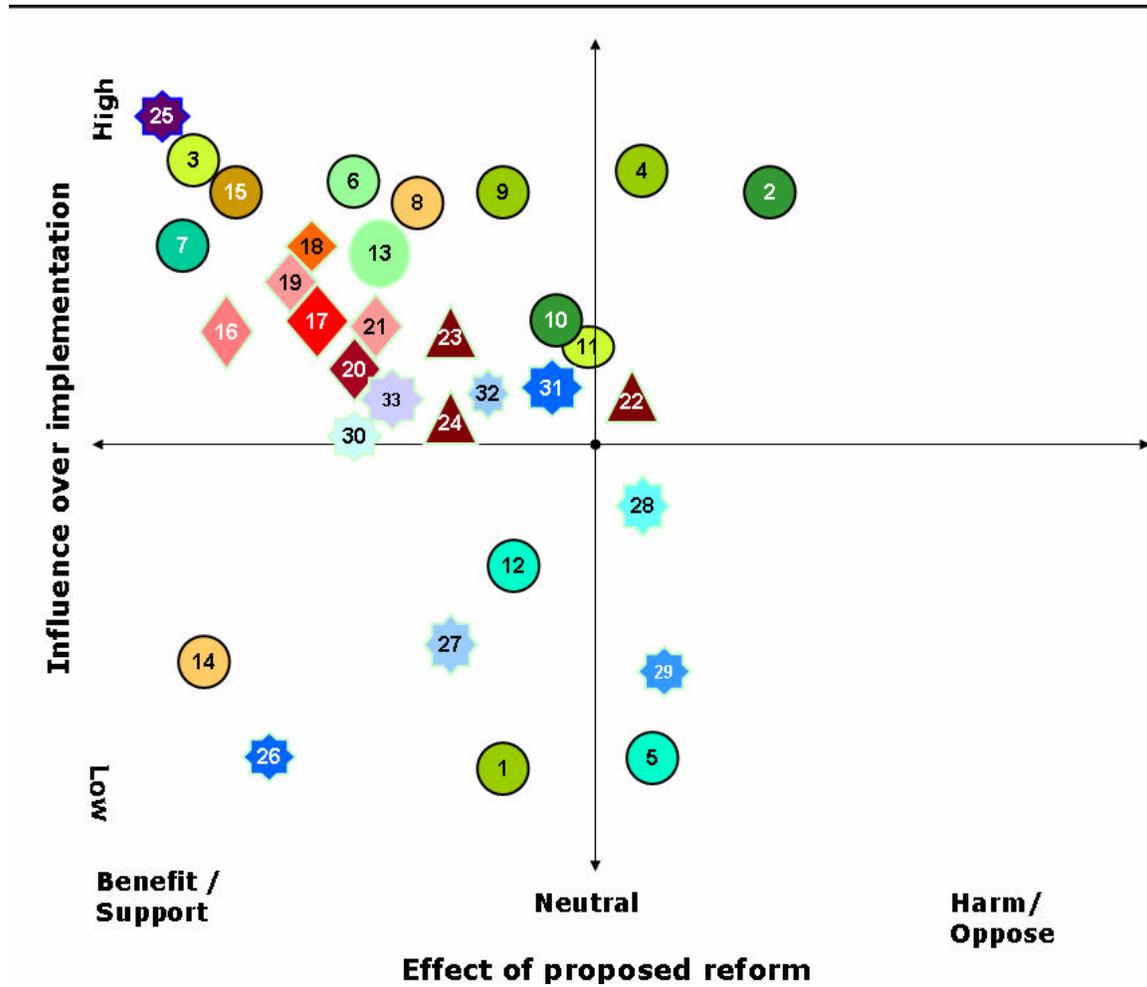
- i) Define boundaries between customary and state tenure
- ii) Define the rights of the state
- iii) Recognize customary land such that it could be traded, used as collateral and inherited
- iv) Define the rights of passage respective to the needs of herders
- v) Provide for affirmative action to overcome existing inequalities--not in terms of percentage allocation, but in terms of institutions to assure rights
- vi) Overcome the gender discrimination embedded in traditional authority

Annex 3 – Figure 2: Mixed reform (influence over decisions) – Legislative changes and measures to improve security and access and recognize the traditional leasehold as marketable



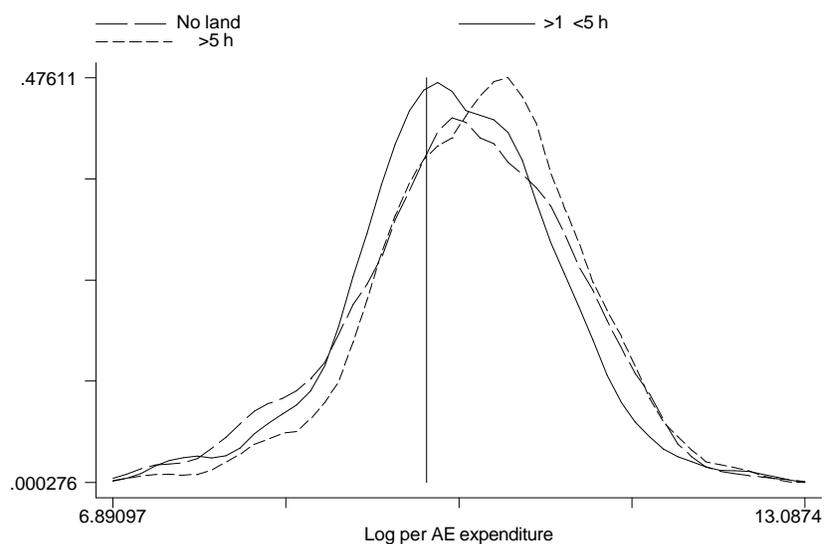
67. Consensus, and therefore support, seems more plausible in the second case. Stakeholders seem to be better off. Naturally, implementation would still be key. Still, this second scenario seems easier to implement, because it would be less controversial, less prone to conflict and resistance, and easier and cheaper to implement with the government's scarce resources.

Annex 3 - Figure 3: Mixed reform (influence over implementation) - Legislative changes and measures to improve security and access and recognize the traditional leasehold as marketable; affirmative action to provide land for women and children (inheritance laws)



Annex 4: Additional Data on Land and Poverty

Annex 4 - Figure 1: Expenditures per adult equivalent by size of area of under cultivation



Annex 4 –Table 1: Regional breakdown of total household income by size of area of under cultivation

Province	No land	Categories of land				Average (?)
		<.5 h	>.5 <1 h	>1 <5 h	>5 h	
CENTRAL	135201	92939	132228	222747	621854	200471
COPPERBELT	165871	74027	97136	235080	420431	143649
EASTERN	100395	80139	97451	158579	3428007	198212
LUAPULA	96760	95350	119262	181411	146505	122778
LUSAKA	180322	311768	152929	211366	754079	236314
NORTHERN	146039	90814	99048	147957	333079	127299
N-WESTERN	92679	118987	127773	184874	594597	143492
SOUTHERN	172084	116298	189310	217929	803261	219398
WESTERN	57252	58877	75983	125374	214888	89419
Total	139825	99765	114547	174200	1041477	162267
Total	45658	32238	36346	38880	68573	38375

Annex 4 – Table 2: Regional breakdown of average per adult equivalent expenditure by size of area of under cultivation

Province	No land	Categories of land					Average (?)
		<.5 h	>.5 <1 h	>1 <5 h	>5 h		
CENTRAL	35593	28678	44242	51218	77800	45799	
COPPERBELT	40822	31188	33585	53910	58444	39614	
EASTERN	47750	37290	40747	34871	41724	37235	
LUAPULA	43404	27238	31245	34108	21345	31904	
LUSAKA	74306	45275	34484	39336	81464	51756	
NORTHERN	39009	30399	29429	37616	58987	34551	
N-WESTERN	62476	48880	43533	42343	67054	46096	
SOUTHERN	45371	34045	46954	36946	85338	42613	
WESTERN	33587	22934	27891	37271	39634	30412	
Total	45658	32238	36346	38880	68573	38375	

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