



GTAC/ CBPEP/EU project on employment-intensive rural land reform in South Africa:
policies, programmes and capacities

FINAL REPORT

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Executive summary

This study focuses on the potential contribution of redistributive land reform to employment creation. Can land redistribution be undertaken in a manner that also creates jobs, and if so, through which types of land use and farming systems, operating at what scales? What is the potential of small-scale farming, in particular?

Despite its many limitations, the study breaks new ground by investigating the potential of small-scale farming for employment generation in specific locations. It highlights the potential for job creation in many commodities produced by small-scale farmers, and recommends a particular focus on extensive livestock and vegetable production.

The study's findings on the number of jobs and the costs per net job in four local municipalities suggest that significant increases in the employment-intensity of agriculture can be achieved if land is redistributed to small-scale farmers. In these four local municipalities alone, net job creation amounts to 23 691 jobs.

To identify the key characteristics of smallholder and small-scale black commercial farmers in South Africa, reviews were commissioned of livestock on extensive rangelands, wool, fresh vegetables, subtropical fruit and nuts, and sugar cane. Studies were undertaken of land tenure and land administration, support services for land reform beneficiaries, agricultural value chains, financing of small-scale farming, socio-cultural factors, climate change and lessons from international experience of support for small-scale farmers. Primary data were collected in four local municipalities in different regions of the country: Sakhisizwe (Eastern Cape), Inkosi Langalibalele (KwaZulu-Natal), Greater Tzaneen (Limpopo), and Matzikama (Western Cape).

A number of assumptions informed the study. 'Employment' includes both employment by others and self-employment, and includes one farmer and 0.3 family members per farming unit. Employment estimates are expressed as 'full-time equivalents' (FTEs). Potential gains from employment-intensive land redistribution are calculated in terms of net jobs, after deducting the number of existing jobs 'displaced' as a result of transferring land. Three key ways in which land reform helps to create more employment-intensive farming systems are: (a) reducing the size of farming units while increasing their total numbers; (b) changing the mix and scale of farm commodities produced; and (c) changing farming systems so that they become more employment-intensive. Reconfigured farming systems will also result in changes in agricultural value chains, but given their complexity, this study does not attempt to estimate these impacts (an exception being livestock production in Kwazulu-Natal, where its potential is considerable).

In estimating net job gains, the study assumes that 50% of the land under large-scale farming at present would be redistributed to small-scale black farmers. This hypothetical amount illustrates the order of magnitude of potential impacts. The study assumed that the two main costs to the state would be (a) land acquisition; and (b) establishment costs, such as the purchase of machinery, or breeding animals for livestock producers. It does not attempt to address all aspects of land redistribution policy; rather, it focuses on the issue of improving employment intensity by promoting small-scale farming.

The study's findings on the number of jobs and the costs per net job in four local municipalities suggest that significant increases in the employment-intensity of agriculture can be achieved if land is redistributed to small-scale farmers. In these four local municipalities alone, net job creation amounts to 23 691 jobs.

In *Inkosi Langalibalele* in KwaZulu-Natal, the main farming system is extensive livestock production; if established on 125 712 ha, these would generate 1 392 net new jobs. Many of these jobs are in goat production, which is more labour intensive than other forms of livestock production. A small area under irrigated vegetables allows 830 net jobs to be generated. The overall cost per net job in this local municipality is R325 425.

In *Greater Tzaneen* in Limpopo, where conditions are suitable for the production of labour-intensive and high-value subtropical fruit and nuts, as well as vegetables, a much large number of net jobs can be created. On 46 050 ha, high value crops units would generate a total of 16 813 net jobs, and on the 25 500 ha of low quality land where small-scale livestock systems are combined with some fruit and vegetables would result in 2 483 net jobs. The overall cost per net job in this municipality is R418 776.

In *Matzikama* in the Western Cape, high value crops such as grapes, vegetables and lucerne, a fodder crop, can be produced on irrigated land along the Olifants River. The Ebenhaeser area is particularly suited to grapes given its proximity to the ocean and thus cooler air. A total of 549 small-scale farm units, on a total of 7 841 ha, would generate 2 976 net jobs. A total of 508 070 ha under extensive livestock yields only 222 net jobs. The total cost per net job in Matzikama is R685 311, higher than in other local municipalities due to the price of land relative to job creation potential.

In *Sakhisizwe* in the Eastern Cape, only a small area under vegetables can be sustained, comprising 26 farms on 260 ha with 294 net jobs. In relation to maize, 114 farm units on a total of 65 685 ha would allow for 660 net jobs to be created. Wool production on 51 585 ha can generate 115 net jobs. Overall, the cost per net job in Sakhisizwe is R426 653.

Local municipality studies reveal a considerable and unmet demand for land from both smallholders and small-scale commercial farmers. However, 'farmers' are not necessarily full-time farmers and agriculture is not necessarily their only source of income. Multiple livelihood strategies are pursued by many. Rural households are not simply units of co-production, co-residence or co-consumption; many are best characterized as a unit within which resources are transferred to members from a variety of sources. Many unmarried women are establishing homesteads of their own and some engage in small-scale agriculture, but their access to capital is often very constrained.

The study's findings have major implications for the targeting and selection of beneficiaries, commodities and farming systems. Extensive livestock production, including wool production in some areas, offers opportunities to increase the employment intensity of agriculture. The bulk of the land surface of South Africa is suitable only for livestock production, and it is likely to be the dominant form of land use on redistributed farms. Net gains in its employment intensity are thus significant at the national scale, if modest at farm level, and would be enhanced if new value chains are invested in. Given expanding domestic-market demand for fresh vegetables, these crops offer important opportunities for small-scale black producers, and their potential for employment creation is particularly significant.

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Key challenges include improved access to irrigation water, markets and extension and advisory services. The production of high-value subtropical fruit and nuts, as well as grapes by small-scale producers has the potential to enhance employment-intensity, but this must be balanced against their high capital and running costs, technically demanding character, and long waiting periods before profits can be earned. In the case of sugar cane, there is clear potential for the revival and re-

expansion of smallholder growers, and perhaps even further expansion of the number of growers. Sugar is the only price-controlled product in South African agriculture at present, and the character of the overarching regulatory framework for the industry and its job creation potential is key.

A key consideration in targeting these commodities and farming systems is how to enhance access to markets and value chains (including agro-processing). In relation to outgrowing arrangements, contract farming and joint ventures, disappointing results in the past do not mean that these should be ruled out.

Climate change is likely to have highly negative impacts on all scales and forms of agriculture, even though its precise nature and timing remain uncertain. Proposals to expand the area of land under irrigation may be jeopardized by a growing scarcity of water and increased competition for access, increasing unreliability and uncertainty of rainfall, and linked changes such as higher temperatures, higher rates of evapotranspiration, and more soil erosion. In general, climate change in the direction of both 'hotter and drier' and 'hotter and wetter' futures, in different zones, is likely to make agriculture riskier and less remunerative.

The allocation of farm production units of appropriate sizes for land reform beneficiaries has been overlooked by planners to date. Appropriate units of production for small-scale farmers include shared grazing areas, subdivided crop farming units located on large farms held in common (often with shared grazing areas), or small individual farms. Supply of land in appropriate units should aim to match as closely as possible the nature of the demand for land. Area-based planning will be required to ensure a good fit with local realities.

No one land tenure system can meet the needs of all land redistribution beneficiaries, and they should be offered a choice of options. Four options appear to be attractive to beneficiaries: (a) land held in common, with the rights of members clearly delineated; (b) a variant of group ownership that involves some portions of land allocated to individual farmers; (c) individual title, following the subdivision of large farms into smaller units; and (d) state leasehold agreements administered in an efficient, transparent and accountable manner.

In relation to institutional frameworks, a continued emphasis on the decentralisation of land reform, is recommended.

Key support services for small-scale farmers benefitting from land redistribution include extension, training and advice, enabling market access, and financial support for both capital investment and running costs. It is vital that support services be tailored to suit the circumstances of smallholders and small-scale back commercial farmers.

In relation to institutional frameworks, a continued emphasis on the decentralisation of land reform, is recommended. District Land Committees (DLCs) should be at the centre of these efforts, working closely with teams based in local municipalities. They should aim to create alliances and partnerships between small-scale producers, commercial farmers, commodity organisations, NGOs, researchers and tertiary institutions. Planning must be guided by a clear set of national policies. A programme of pilots in selected local municipalities, which seek to produce and implement a set of practical, multi-year plans and budgets is recommended.

Policies and programmes to build government capacity for small-scale farmer support are crucially important, through revised curricula for basic and in-service training, the use of field methods that involve co-learning, and building relationships with other agencies able to assist with relevant knowledge and skills. But these require time, while interventions are needed to help secure the

success of land reform beneficiaries in the short-term. The study recommends a two-year 'crash programme' to build capacity and pilot the implementation of the policies proposed.

Some constraints on small-scale farming arise from problems in the policies of other sectors and government departments. Addressing these at the same time as implementing an employment-intensive land redistribution programme is vital. These include policies in relation to informal agricultural markets, water allocation reform, environmental management and climate change, state procurement and enhancing the understanding of small-scale farming through improved data collection.

Policy-making involves invidious choices and trade-offs; here we consider two. The first is in relation to the capital costs of land redistribution versus its employment intensity. Expanding employment-intensive, small-scale systems of farming can involve high levels of capital investment, as in the case of subtropical fruit and nuts, and grapes. Low-cost farming systems such as extensive livestock are feasible on a large scale, given that much of South Africa is suitable only for grazing, but are less employment-intensive. Between these two extremes lie intermediate systems, with medium levels of capital intensity but relatively high employment-generation potential, such as small-scale commercial vegetable production using labour for operations such as weeding, and wool. In the light of the severe fiscal constraints experienced by government at present, a strong focus on two systems of relatively low capital intensity is warranted: extensive livestock and smallholder vegetable production.

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Another trade-off that must be considered by policy makers is that between jobs and wages. Labour legislation in South Africa regulates the labour conditions of employees and specifies a minimum wage. Enforcing these provisions on large-scale commercial farms often proves difficult, and would be even more difficult if attempted on small-scale farms. The study suggests that labour policies take into account the reality of small-scale farming in South Africa, by adopting legal definitions of small-scale farming and specifying more flexible labour conditions than on large-scale farms. The goal of creating 'decent work' in agriculture should be retained, and its feasibility enhanced through implementing effective policies for small-scale farmers.

The study recommends that government, perhaps with donor support, launch a small number of pilot programmes to explore the land redistribution policies suggested here.

1 Introduction

The Capacity Building Programme for Employment Promotion (CBPEP) is an EU-funded initiative aimed at assisting the Government of South Africa to attain its goal of reducing unemployment, by building state and institutional capacity in three result areas: active labour market policy interventions for the unemployed; small and medium enterprise development, including the informal sector; and further education and training and skills development.

Government has put in place a range of policies and programmes aimed at growing the economy, stimulating job creation and reducing unemployment. Results to date, however, have been uneven. Policies have not always been effective or aligned, implementation has often been ineffectual, and evidence as to what works, and what doesn't – and why – is often absent. There is an urgent need to ensure policy alignment and effective implementation, and a need for policy, planning and implementation that are grounded in empirical evidence. The CBPEP seeks to build state capability for employment promotion, as well as support strategic dialogue, shared problem-solving and practical collaboration between the social partners. It also aims to strengthen the knowledge and evidence base for effective policy, planning and implementation.

This study focuses on the potential contribution of redistributive land reform to employment creation. Land reform policy seeks to address South Africa's legacy of racial privilege, skewed patterns of land ownership and tenure insecurity. In relation to rural areas, it also aims to redistribute productive land-based resources and create enabling conditions for agricultural production by land reform beneficiaries. Although land reform is widely acknowledged as having largely failed to achieve these objectives to date, a range of new policies and approaches are currently under discussion (see reports by the High Level Panel of Parliament of 2017, and the Presidential Advisory Panel on Land Reform of 2019). A new policy on Beneficiary Selection has been recently announced, and an Agricultural Master Plan is currently in development.

Land reform is a political necessity, and promises benefits in relation to redress and restorative justice, rural food security and enhanced security of tenure. Given that a government programme to implement land reform exists, the following questions arise: can redistributive land reform be undertaken in a manner that also creates more jobs, and if so, through which types of land use and farming systems, at what scales? If there is potential for employment creation, then what kinds of policy frameworks are required to realise this potential?

This study commenced in September 2019 and ends in April 2020. It attempts to answer the questions listed above, based on systematic reviews of available evidence, as well as an assessment of empirical evidence gathered in four local municipalities. The study seeks to:

- Identify the key characteristics of smallholder and small-scale black commercial farmers in South Africa, the value chains that they participate in and the markets that they currently supply, and the socio-economic, institutional and agro-ecological conditions which enable their systems of production or constrain them. In-depth reviews were commissioned of a selected number of commodities which show particular promise: livestock production on extensive rangelands, wool, fresh vegetables, subtropical fruit and nuts, and sugar cane.
- Analyse key contextual variables that influence success or failure in small-scale agriculture. Commissioned studies were undertaken of land tenure and land administration, support services for land reform beneficiaries, agricultural value chains, financing of small-scale farming, social and cultural factors that influence success or failure, climate change and small-scale farming in South Africa, and lessons from international experience.

- Collect and analyze primary data from four local municipalities in different regions of the country, in order to complement the reviews referred to above. Data were collected on current farming systems, land potential, the demand for land, and the potential for employment-intensive smallholder and small-scale commercial farming systems. The four municipalities, whose agro-ecological characteristics vary considerably, are: Sakhisizwe (Eastern Cape), Inkosi Langalibalele (KwaZulu-Natal), Greater Tzaneen (Limpopo), and Matzikama (Western Cape). These studies estimate the potential for net job creation in the locality, as well as estimating of the costs of land acquisition and the costs of establishing suitable farm enterprises on transferred land.
- Formulate a coherent set of national policy frameworks in relation to selecting beneficiaries; identifying and transferring land in appropriately constituted farm units, securing land rights, capitalizing new farming enterprises, providing support services for beneficiaries, creating an enabling institutional framework, building the required technical capacity within implementing agencies, and mitigating the impacts of climate change. The framework also discusses complementary policies in relation to the informal economy, water allocation reform, environmental management and public procurement.

Our research methods comprised systematic reviews of the existing literature, interviews with different stakeholders, focus group discussions, and the collation and analysis of secondary data from state and non-state sources. Our estimates of the employment-intensity of different commodities and farming systems have relied on information supplied by key informants in the four local municipalities, including farmers, government officials and staff of non-state organisations such as commodity associations, as well as data available in the wider literature, and in some instances on the practical experience of the members of the study team. We also held a number of team workshops, attended by members of the Project Steering Committee and invited experts, to discuss and analyse emerging findings. A planned consultative workshop in which we would seek feedback on a first draft of the final report had to be cancelled because of the lockdown imposed by government's response to the coronavirus pandemic.

Our methodology, which combined wide-ranging reviews of the available literature with primary data collection in particular localities, allowed us to 'ground-truth' our general conclusions by investigating the potential for job creation under specific conditions. This approach may be of interest to policy makers, since it delivers credible, policy-oriented research findings relatively quickly.

This synthesis/policy document is based on and incorporates the results of the 16 thematic, commodity and local municipality studies which are listed at the end of the report. Three summaries of the research findings in these background studies (thematic, commodity and local municipality studies, respectively) are provided in separate documents.

2 Small-scale, employment-intensive agriculture and land reform in post-apartheid South Africa

Currently the agricultural sector, together with forestry and fisheries, contributes around 2% to GDP and around 5% to employment, with a total of around 757 658 workers (Statistics South Africa, 2020). Around 15 000 small, medium and large-scale commercial farmers contribute the bulk of produce to formal markets (and earn 95% of total income), and employ close to 90% of all agricultural workers. Only a small number of these commercial farmers are black. Of the total of 40 122 farms registered for VAT, i.e. with a minimum turnover of R1 million p.a., around 25 000 are deemed to be 'micro-farms', and contribute little in the way of income or employment. The term 'micro-farms' is somewhat misleading. Most black farmers are not registered for VAT, and are either

subsistence-oriented (around 2 million) or market-oriented (around 180 000); the latter often supply informal markets as well as formal markets (Cousins, 2018).

Small-scale farming is constrained by its small land base and inadequate levels of access to infrastructure, capital, production finance, irrigation water, formal markets, technical information and advice. State support for small-scale farming has suffered from inadequate budgets and poor targeting (Aliber and Hall, 2012).

Hall (2009) suggests that agriculture needs to be disaggregated by scale of production, level of output, profitability, employment and debt, as well as by the number of livelihoods supported. In her view, agrarian reform requires: (a) a more mixed farming sector and growing numbers of smallholders; (b) increased opportunities for small-scale farming of commercial crops and subsistence production, often combined within the same productive unit; and (c) priority areas for restructuring, including agricultural sub-sectors in decline, areas where land is under-utilised or high levels of debt are found, and places where opportunities exist for labour-intensive farming or agro-processing.

Aliber *et al* (2009) define semi-subsistence producers as those engaged in agriculture mainly for own-consumption purposes. These are distinguished from smallholder black farmers, defined as small-scale producers who consistently market a surplus but who do not necessarily regard agriculture as a full-time activity or as their only source of income. In the authors' scenario-building exercise, a diversified, smallholder-led scenario yielded over three million net livelihoods. Their model involves successful, large-scale land redistribution of 30% of commercial farm land, mainly to semi-commercial smallholders but with smaller proportions of land also being transferred to semi-subsistence and black large-scale producers as well.

The National Development Plan of 2012 argues that a million new jobs could be created in agriculture, two-thirds of them in primary production and one-third in secondary jobs, in linked industries such as the manufacture of inputs and agro-processing. Key to this expansion is adding 500 000 hectares to the area presently under irrigation, estimated at around 1.5 million hectares, through better use of existing water and the development of new schemes. Other strategies include converting underused arable land in communal areas and land reform projects to commercial production, giving black farmers access to value chains, and encouraging higher levels of support for black farmers from white farmers and agribusiness companies (NPC, 2012).

Aliber (2019) proposes three main types of land redistribution beneficiaries: (a) settlement-oriented beneficiaries, on roughly 0.1 to 1 hectare per household. These would number 794 000 and receive 397 000 ha; (b) small-scale farmers on roughly 1 to 50 hectares per household of arable land, but also grazing for up to 40 large-stock units, including on commonage projects. These would number 233 000 and receive 3.5 million ha; (c) large-scale farmers on roughly 50 to 500 hectares per household of arable land, but also grazing for over 40 large-stock units. These would number 32 000 and receive 9.5 million ha.

A problem in all of these estimates is that the literature on small-scale agriculture in South Africa is based largely on case studies, and official national data sets are thin and misleading at times. None of the estimates discussed above have specified the particular commodities, combinations of products and farming systems with the potential to sustain livelihoods and increase the numbers employed in the agricultural sector. In this study we attempt to fill this gap, at least to a certain extent.

3 Key terms, definitions, assumptions and caveats

The study team approached the question of employment-intensive land redistribution in a particular manner. Key terms such as small-scale farmers, farming systems, employment and employment intensity were clearly defined, estimates of the labour requirements of different commodities were

drawn from a variety of sources, and assumptions were made in relation to the extent of land redistribution and the costs to be borne by government. These are described here, along with a caveat in relation to those aspects of land redistribution and land reform more generally that are not addressed in the study.

A typology of small-scale farmers

We distinguish between the following categories of small-scale, black farmers in South Africa:

- *Smallholders* are farmers who rely mainly (but not exclusively) on household labour in their production systems. In this project, we focus on market-oriented smallholders, who supply both informal and formal markets to varying degrees, rather than those who are subsistence-oriented;
- *Small-scale black commercial farmers* are farmers who rely mainly on hired labour (both permanent and casual or temporary workers) in their production systems.

We acknowledge that these terms are abstractions, and that in practice the dividing line between these categories is often blurred. However, they help to clarify what is at stake when making key policy choices, for example in relation to beneficiary selection and the support services that beneficiaries require.

Employment

in our study 'employment' includes both employment by others and self-employment. We have included one farmer per farming unit in our estimates of employment potential, as well as 0.3 family members per farm. All employment estimates are expressed as 'full-time equivalents' (FTEs), which assume 264 days of work per annum.¹ We have calculated the potential gains from employment-intensive land redistribution in terms of net jobs, after deducting the number of existing jobs 'displaced' as a result of transferring land and replacing one farming system by another.

We acknowledge that many of the jobs created by small-scale farmers will not be full-time jobs, including those of the farmer and family members who work on the farm. In our view, the fact that rural households which benefit from an employment-intensive land redistribution are likely to receive income from a range of sources other than agriculture is a potential benefit, given that these sources may provide funds to be invested in agriculture. For many beneficiaries and farm workers, farming will be one component of a wider household livelihoods strategy that is complex and diverse, and this will assist in mitigating risks and reducing vulnerability to shocks.

We also acknowledge that some farm workers in South Africa at present are not paid the statutory minimum wage, and that these include workers from neighbouring countries. Our case studies confirm that there is much casual and piece-rate employment on farms, both large-scale and small-scale, which are generally paid below the statutory national minimum wage rate. It is likely that some workers employed by land redistribution beneficiaries will also be underpaid.

Farming system

A key term utilised in this study is 'farming system'. By this we mean '... a population of individual farm systems that have broadly similar resource bases, enterprise patterns, household livelihoods and constraints, and for which similar development strategies and interventions would be appropriate' (Dixon *et al*, 2001).

¹ In practice, many of the jobs created through land redistribution are likely to be less than full-time in character, and our estimates of total numbers of net jobs could thus be increased by a factor of something like 0.5.

For any given commodity, farming systems can vary widely. In general, however, small-scale farming systems tend to be more labour-intensive than large-scale systems, and some scholars are of the view that they can be more productive per unit of land (if not of labour or capital; see Lipton, 1996). This is one key reason for the strong focus in mainstream development economics on agriculture and land reform as means to increase rural employment and incomes.

Increasing employment-intensity

There are three key ways in which land reform helps to create more employment-intensive farming systems:

1. reducing the size of farming units while increasing their total numbers. This expands the number of farmers/entrepreneurs and family members who are self-employed, increases both opportunities and incentives to employ more labour, and may decrease incentives to replace labour with machinery and equipment (depending on types of products and relative prices of products and labour);
2. changing the mix and scale of farm commodities produced, adding or expanding those which are more employment-intensive (e.g. replacing grain crops with vegetables; replacing cattle with goats; planting fruit on what was previously grazing land);
3. changing farming systems so that production methods are more employment-intensive (e.g. weeding by hand rather than herbicides²; herding animals rather than controlling their movement using fencing);

These logics and their effects are evident in our local municipality case studies. They are 'golden threads' running throughout the study, and form the underlying basis for the argument that a well-targeted land redistribution programme has the potential to create a significant number of net jobs in agriculture.

Employment in agricultural value chains

Reconfigured farming systems will also result in changes in agricultural value chains i.e. of enterprises up- and down-stream of farming itself. Given the complexities of such changes, in this study we have not attempted to estimate their net employment impacts. This would have required more time and resources than were available. We did, however, explore aspects of some of the value chains in which small-scale farmers currently participate, since these are generally poorly understood.³ Thus, the local municipality study in KwaZulu-Natal explored the employment-creation potential of new value chains centred on extensive livestock production, especially goats (see section 4 below).

Labour requirements

Estimates for the number of jobs per ha required for the production of different commodities are generally difficult to find, not only in South Africa.⁴ Our estimates for small-scale farming systems are taken from three basic sources: (a) from information on current levels of labour intensity in large-scale and small-scale commercial farming, as provided by key informants in the four local municipalities (e.g. subtropical fruit and nuts, grapes, maize, etc); (b) relevant research findings from studies in the locality (e.g. vegetables in KwaZulu-Natal, Neves and Hakizimana, 2015); and (c) practical experience of working with small-scale farmers (e.g. programmes of support to extensive

² These kinds of practices may also help to render farming systems more environmentally sustainable.

³ Neves, 2020.

⁴ An exception is BFAP (2011: 87-88), which offers 'labour multipliers' for a number of agricultural commodities in South Africa, but only for the large-scale commercial farming sector, without providing any sources and with no explanation of the methodology used to estimate these multipliers.

livestock producers in KwaZulu-Natal provided by Mdukatshani Rural Development Programme and Heifer Project South Africa).

Numbers of hectares redistributed

In estimating net job gains from land redistribution we have assumed that 50% of the land under large-scale farming at present is redistributed to small-scale black farmers. This hypothetical amount illustrates the order of magnitude of potential impacts. Our estimates do not aim to provide detailed and precise assessments of the actual costs and benefits that would be involved in practice, or of the rate at which land could be redistributed. These would have required much more detailed assessments than was possible within the resource constraints of the project.

Costs

We have assumed that the two main costs to the state of land redistribution are (a) land acquisition; and (b) establishment (i.e. setup or capitalisation) costs, such as machinery, irrigation equipment and planting material for cropping, and breeding animals for livestock producers. In relation to the former, we have used current average market prices⁵ to estimate the cost of land, and for the latter, assumed that the state will fund the acquisition of 50% of the maximum Large Stock Units (LSUs) that the farming unit can carry at recommended stocking rates⁶.

We recognize that in practice the state would also need to provide or pay for support services of various kinds, including training, but we have not attempted to estimate the costs of these here. In relation to annual production costs, the question of grant versus loan finance is discussed in depth in the thematic paper on financing small-scale farming (Aliber, 2020) and is touched on briefly elsewhere in this report.

Land reform policies

This study does not attempt to address all relevant land redistribution policies, including vexed questions such as how to improve the performance of communal property institutions, or how to best support beneficiaries engaged in large-scale and capital-intensive commercial farming. Rather, we have focused quite narrowly on the question of improving employment intensity through a focus on beneficiaries who engage in small-scale farming. We do not express a view on the priority that land reform policy should accord to different types of beneficiaries or projects, since this was outside our brief.

Climate change

We have attempted to incorporate the findings of the background study on potential impacts of climate change on small-scale farmers into our recommendations. However, we acknowledge that it is extremely difficult to estimate the impacts on, for example, the availability of irrigation water to land reform beneficiaries in future decades, and that a much more detailed assessment is required of this challenge.

⁵ This report does not discuss the controversial question of the levels of compensation to be paid to landowners whose land is expropriated.

⁶ We acknowledge that tree crops, in particular, require the application of annual inputs for several years before any income is earned, but have not factored these into cost estimates.

4 Local municipality studies: estimates of the employment-creation potential of land redistribution and its costs

As stated above, summaries of the detailed research findings of the four local municipality studies are available, as well as 'in brief' versions of these. Here we focus on estimates of employment-creation potential.

Table 1 below summarises our findings on numbers of potential jobs and the costs per net job in each of these four local municipalities. Our findings suggest that significant increases in the employment-intensity of agriculture can be achieved if land is redistributed to small-scale farmers.⁷ In the four local municipalities, net job creation amounts to 23 691 jobs. Both jobs and costs vary considerably across these different contexts, as expected, given major variations in agro-ecological conditions and in the types of commodities and farming systems they can sustain.

Note: the findings shown here are estimates that seek to gauge the potential orders of magnitude of jobs that might be created through employment-intensive land redistribution. They do not attempt detailed and precise assessments of the actual costs and benefits that would be involved in practice.

Table 1: Estimates of net job creation and cost per net job in four local municipalities, if 50% of the land currently under large-scale farming is redistributed

Local municipality/ farming systems	Farm units	Total hectares	Net jobs	Land cost/net job (R)	Setup cost/net job (R)	Total cost/net job (R)
Inkosi Langalibalele (KZN)						
Vegetables	91	714	830	129036	53777	182813
Extensive livestock	246	125710	1392	349980	60496	410476
All products	337	125884	2222	267449	57986	325435
Greater Tzaneen (Limpopo)						
Fruit and vegetables	2677	46050	14719	-	-	-
Fruit, vegetables and extensive livestock	68	25500	2483	-	-	-
All products	2745	71550	17202	271132	147644	418776
Matzikama (Western Cape)						
Grapes, vegetables, lucerne	549	7841	2976	362979	107857	470835
Extensive livestock	169	508070	222	3432905	127131	3560036
All products	718	51551	3198	576117	109195	685311
Sakhisizwe (Eastern Cape)						
Vegetables	26	260	294	35374	55284	90658
Grain	114	5685	660	148685	88640	235325
Extensive livestock	258	51585	115	2242826	158539	2401365
All products	398	57530	1069	341412	84941	426353

⁷ Appendix 1 sets out the more detailed findings, as well as showing the context-specific assumptions underlying these estimates.

- Note: Lack of data did not allow the market price of land in Greater Tzaneen to be disaggregated, and an average price of R65 183/ha was calculated from the 2017 municipal valuation roll. This means that the land costs of the two main farming systems could not be established. The methodology used to calculate set-up costs in this case makes it impossible to present a disaggregated analysis.

In *Inkosi Langalibalele* in KwaZulu-Natal, the main farming system is extensive livestock production. Taking account of the three main biomes (grass, grass savannah and bush thicket), a total of 246 'farm units' each comprising 100 Large Stock Units (LSUs) can be established on 125 712 ha, generating 1392 net jobs, at a cost of R410 476 per net job.⁸ Many of these jobs are in goat production, which is more labour intensive than other forms of livestock production. A small area (714 ha) under irrigated vegetables allows 830 net jobs to be generated, at a cost of R182 813 per net job. The overall cost per net job in this local municipality is R325 435. In addition to employment at the point of production, it is estimated that an additional 1 277 jobs could be created in livestock value chains, thus bringing down the cost per net job to R237 989, a considerable difference. These would be new jobs and would not 'displace' existing jobs.⁹ These additional jobs would lower the overall net cost per job to R222 463.

In *Greater Tzaneen* in Limpopo, where both climate and soils are generally suitable for the production of labour intensive and high value subtropical fruit and nuts, as well as vegetables, a much large number of net jobs can be created. Here, small-scale commercial farm units of between 30 ha and 60 ha, as well as smallholder farms of between 5ha and 30ha, were assumed as being profitable for the production of a range of crop mixes, comprising mangos, macadamia nuts, avocados, citrus, blueberries and vegetables in different combinations. On 46 050 ha, these units amounted to 2 677 farms and generated a total of 14 719 net jobs. On a further 25 500 ha of lower quality land, where fruit and vegetables can be combined with livestock, net jobs amount to 2 483. The overall cost per net job in the municipality amounts to R418 776.

In *Matzikama* in the Western Cape, high value crops such as grapes, vegetables and lucerne, a fodder crop, can be produced on irrigated land along the Olifants River. The Ebenhaeser area (where a large land restitution claim is being finalized), is particularly suited to grapes given its proximity to the ocean and thus cooler air. A total of 549 small-scale farm units of between 6 ha and 20 ha, on a total of 7 841 ha, form the basis of estimates of net job creation of 2 976 jobs, at a cost of R470 766 per job. A total of 508 070 ha under extensive livestock yields only 222 net jobs, however, at a land cost of R3 432 905 per job and an overall cost of R 3 560 036 per job. As a result, the total cost per net job in Matzikama is R685 311, higher than in the other local municipalities.

In *Sakhisizwe* in the Eastern Cape, few high value crops can be produced. Only a small area under vegetables can be sustained, comprising 26 farms of 10 ha each on 260 ha, and the total cost per net job is R90 813. In relation to maize, estimates are based on 114 farm units of 50 ha each on a total of 65 685 ha, which allow for the net job creation of 650 jobs, at a cost of R235 325 per job. Extensive livestock in the form of wool production on 51 585 ha (with 258 farm units of 200 ha each) generates 115 net jobs, a cost of around R2.4 million per job or roughly similar to that in Matzikama. Overall, the cost per net job in Sakhisizwe is R426 653, roughly the same as that for Greater Tzaneen. However, this cost-per-job does not factor in a much larger number of jobs that might be created in the former homeland part of the municipality due to the relocation of larger stock owners out the area through land reform.

⁸ A small number of dairy farms in this municipality, which use irrigation to grow maize for fodder, are not considered in this exercise.

⁹ Alcock, Geraci and Cousins, 2020.

These findings suggest strongly that redistributing land to smaller-scale black farmers could indeed help to generate higher levels of employment in the agricultural sector. However, optimism must be tempered by the fact that assisting beneficiaries to establish and sustain profitable small-scale farming enterprises in practice would pose serious challenges. These challenges and how to address them are discussed in the policy recommendations that follow.

5 A national policy framework on employment-intensive land redistribution

In this section, we describe a policy framework for land redistribution that aims to support increased employment in the agricultural sector through making land and other resources available to small-scale black farmers in an effective manner. The component parts of such a framework must clearly be well-aligned with one another. The key element of the framework is appropriate targeting of beneficiaries, farming systems and land, in a manner that allows beneficiaries to constitute farming units of appropriate sizes. Tenure security must be provided to beneficiaries through effective systems of land rights and their administration, with a choice of options available to beneficiaries.

Farmers must be provided with support services that are tailored to the specific needs of a differentiated population of small-scale farmers engaged in the production of a variety of commodities, using different farming systems. Support must include enabling farmers to gain access to a variety of markets and value chains, including those that are informal, less formal and 'loose' in character. Suitable financing arrangements that include a mix of grants and loans will help capitalise small-scale farming systems and support farmers to purchase annual inputs. Enhancing the resilience of small-scale farming systems in the face of climate change is a key issue that agricultural policy must now address with great urgency.

Building the capacity of both state and non-state agencies to provide appropriate support services to small-scale farmers is required. Key processes and decisions should be decentralized to district and local municipality level, and guided by a clear national policy framework. To be effective, decentralization will require that both government officials and staff in non-state agencies develop the required capabilities, and that rigorous oversight of local processes is provided by managers in the relevant institutions and at different levels of government. Some constraints on small-scale farming arise from problems in the policies and practices of other sectors and government departments, such as local government and water reform. Addressing these is also important.

5.1 *Farming and rural livelihoods: key contextual realities*

Targeting and selection of the right kinds of beneficiaries and commodities and farming systems are indispensable in a successful land redistribution programme aimed at increasing employment in agriculture. In principle, one can distinguish between 'smallholders' (who use mainly family labour) and 'small-scale commercial farmers' (who rely mainly on hired labour, including permanent and temporary workers). In practice, however, the differences are blurred, and in our studies we discovered a considerable and unmet demand for land from both types of farmer.

Realism demands that we acknowledge key realities peculiar to the South African context, as well as some commonalities with rural households in the wider African context.¹⁰ 'Farmers' are not necessarily full-time farmers and agriculture is not necessarily the only source of income for their households. Critically, multiple livelihood strategies are pursued by most rural families and are also likely to be pursued by land redistribution beneficiaries. These involve close inter-connections between rural and urban livelihood sources, through migration, remittances and care of the young and the old. Land redistribution policy should thus not assume that beneficiaries will rely on farming

¹⁰ Losch, 2020.

alone as a source of income (and capital for investment in agriculture).¹¹ We emphasise that our methodology for estimating net employment creation, using full time equivalents or FTEs as the metric, should not be read as connoting that we are considering only paid employees. Self-employment and the contributions and benefits of family members are included in our estimates.

Nevertheless, household access to income from formal employment is particularly important. Rural households are not simply units of co-production, co-residence or co-consumption; many are best characterized as a social unit within which resources are regularly transferred to members from a variety of sources. Government social grant transfers mitigate the uncertainty of securing wage income, and help reduce the vulnerability produced by structural poverty and high levels of unemployment. They provide regular and predictable cash injections, albeit in small amounts, which are contributing to a fundamental reshaping of gender and generational relations.¹²

Patterns of marriage and processes of household formation in rural areas are also changing, with a continuing decline in the rate of marriage and a consequent rise in the number of households comprising unmarried mothers and their children. This reflects a history of migrant labour, and growing structural unemployment in the present. Many unmarried women are now establishing homesteads of their own, and some engage in small-scale agriculture, mainly in the form of livestock production (often small livestock) and vegetables (where water is available). Without husbands or male partners to contribute wages or other forms of cash income (at least potentially), access to capital by these female farmers is often very constrained.

Rural settlement patterns are changing, influenced by the availability of water, electricity, schools and health services, the provision of all of which has been considerably expanded in rural areas over the past two decades. Access to such services is vitally important for social reproduction, and for the majority of the rural population they are probably more important than access to land for agricultural production. Access to services is also important for land redistribution beneficiaries, and finding ways to meet these needs must be factored into planning.

Finally, the ceremonial livestock economy remains important to many members of modern South African society, despite high levels of urbanisation.¹³ Even though most participants in 'traditional' ceremonies are not owners of livestock, these events continue to anchor kinship relations, marriage processes and the formation of households. Ceremonies act as a social 'glue' that brings together kin spread across urban and rural spaces, as well as neighbours in conflict with each other over resource allocations, and members of households and neighbourhoods torn apart by processes of social differentiation, including along gender lines. But they can also reinforce social inequality, as when only the wealthy can muster the resources to undertake the full range of actions involved in such ceremonies.

5.2 Opportunities and constraints facing small-scale farmers as beneficiaries of land redistribution: implications for targeting and beneficiary selection

In this study, six key commodities have been identified with significant potential for employment creation (vegetables, subtropical fruit and nuts, grapes, sugar cane, wool and extensive livestock production), but no doubt others exist (e.g. potatoes, deciduous fruit, flowers; see the table in chapter 6 of the National Development Plan (NPC, 2012). Further commodity studies could well show that these have similar potential, as some of the local municipality studies suggest is the case.

¹¹ Hornby, 2020.

¹² Hornby, 2020.

¹³ Alcock and Geraci, 2020; Hornby, 2016; Hornby and Cousins, 2019.

One option is grain production, despite its low employment intensity, if more labour-intensive methods were to be adopted by small-scale producers, as is projected to be feasible in Sakhisizwe.¹⁴

In whatever manner a higher degree of labour intensity is achieved, the farms so constituted must be able to (at least) survive and (hopefully) prosper in the highly competitive South African agricultural economy. Land reform can help to overcome significant barriers to entry by small-scale farmers, including the cost of land and lack of access to irrigation water. In our view, the fact that significant numbers of small-scale black farmers already engage in profitable production of fresh vegetables, extensive livestock, wool and sugar cane provides grounds for optimism, as does the growing interest in subtropical fruit and nuts by such farmers in Limpopo Province, and grapes in the Western Cape. However, programmes to expand these numbers, including land reform, require more appropriate and effective extension and advisory services. Dedicated and place-based support services will need to be implemented, supported by the training of existing staff (see section 5. 5).

Our studies suggest that *extensive livestock production*¹⁵, including *wool production* in some areas¹⁶, is likely to be an important farming system on redistributed land. We acknowledge that in general extensive livestock production systems are not employment intensive, but four considerations are relevant here:

- Small-scale livestock farming systems in South Africa generally involve access to shared grazing land, both in communal areas and on land acquired through land reform. Internal fencing (e.g. to divide grazing into separate paddocks) is absent, animals are kept in kraals overnight, and animal mobility is generally controlled through herding, which generates jobs.
- In addition, significant shifts in the composition of herds in communal areas are occurring, away from large stock, i.e. cattle (which eat mainly grass) and towards small stock (sheep and goats). Goats are predominantly browsers of woody plants like bushes and shrubs. Farmers point towards the phenomena of increased droughts, and increases in bush encroachment. The latter could well be the result of increased carbon levels in the atmosphere brought about by global warming.¹⁷
- Markets for livestock produced on extensive rangelands include formal markets for beef, wool and meat from goats and sheep on communal rangelands. In addition, informal markets for cattle, goats and sheep for a variety of purposes are poorly understood, but are likely to be significant and with the potential to expand considerably.
- Small livestock tend to require more herding than large stock, and the livestock production systems of small-scale black farmers are thus becoming more labour intensive;
- The vast bulk of the land surface of South Africa is suitable only for livestock. The dominant form of land use on redistributed farms will thus be livestock production. Net gains in the employment intensity of extensive livestock production following the transfer of land to small-scale farmers are thus potentially significant at the national scale, if modest at farm level.

In the context of expanding domestic-market demand for *fresh vegetables* (NPC, 2012: 203), these crops offer important opportunities for small-scale black producers.¹⁸ Given the labour intensity of

¹⁴ Aliber and Xabidiya, 2020

¹⁵ Alcock and Geraci, 2020.

¹⁶ Kenyon, 2020.

¹⁷ In one view, extensive as well as intensive systems of livestock production need to be curtailed given their contributions to climate change (Monbiot, 2019), but there is no scientific consensus on this issue as yet.

¹⁸ Bunce, 2020a

small-scale vegetable production systems, the potential of this particular commodity for employment-creation through land redistribution is particularly significant. Four key challenges facing small-scale producers which land, agricultural and water policies need to address are:

- Improved access to irrigation water on redistributed land via water allocation reform;
- The development of low-cost but water-efficient irrigation technologies;
- More appropriate and effective extension and advisory services;
- Improved access to markets for perishable produce, which include 'informal' markets accessed through 'loose' value chains, as well as more demanding formal markets such as public institutions (e.g. hospitals and schools), wholesale fresh produce markets run by municipalities, and contracts with supermarkets in 'tight' value chains.

The production of *high-value subtropical fruit and nuts, as well as grapes* by small-scale producers has the potential to enhance employment intensity.¹⁹ However, this must be balanced against the high capital and running costs of these production systems, their technically demanding character and thus the high levels of skill required by farmers, and the fact that many of these crops involve long waiting periods before profits can be earned. High value crops such as fruit often require farmers to have detailed technical knowledge, and their educational background must facilitate the acquisition and use of such knowledge.

In the case of *sugar cane*, there is clear potential for the revival and re-expansion of smallholder growers back to the high point of the 40 000 to 50 000 producers who supplied the sugar industry in prior decades, and perhaps even expanding their numbers.²⁰ Given that sugar is the only price-controlled product in South African agriculture at present, the overarching regulatory framework for the industry, including the pricing of sugar, is key. The commodity study on sugar makes a number of specific policy recommendations on how to achieve this goal, including in relation to how land acquired through redistribution could be allocated to beneficiaries in areas suitable for sugar cane. These recommendations factor in the sugar tax at its present levels.

For some of these commodities, there is also potential for job creation in agro-processing, (e.g. grading and packing subtropical fruit and nuts for export markets, producing atchar from mangos, packing or canning vegetables for the domestic market, and the industrial processing of wool, meat and sugar. We have not attempted to estimate the employment-generating potential of such processing, or of value chains more broadly, apart from the case of extensive livestock in KwaZulu-Natal, where there is clearly considerable potential.²¹ Value chains are clearly an important consideration for employment creation, and an issue that requires further investigation.²²

The *markets* that small-scale farmers supply are often either 'informal' (in the sense that they are only loosely regulated, and often barely recognized, by the state), or embedded in 'loose value chains' characterized by many one-off or spot transactions, rather than in regulated supply chains with clearly defined and stable marketing arrangements (or 'tight value chains'). Often produce is sold to informal traders, who own their own transport and engage in farm gate purchases for re-sale to consumers.²³ Other markets that small-scale producers supply are more formal in character, e.g. wholesale fresh produce markets operated by municipalities and metros, and livestock auction sales.

¹⁹ NPC, 2012: 202; Genis, 2020.

²⁰ Dubb, 2020.

²¹ Alcock, Geraci and Cousins, 2020.

²² Neves, 2020.

²³ Traders also buy second or third grade produce from large-scale commercial farmers for sale to hawkers or consumers (Bunce, 2020; Genis, 2020).

Commodities produced by small-scale farmers for sale in informal markets comprise fresh vegetables and extensive livestock, for the most part, but can include subtropical fruit such as mangos. In the case of livestock, a large ‘ceremonial’ market exists in both communal and urban areas, for animals slaughtered in a variety of rituals and events. In many regions, goats and sheep have replaced cattle in these ceremonies. In the case of both vegetables and livestock, local authorities provide little or no support, or are actively hostile and discourage the use of open space for these informal markets. While little is known about the aggregate size of such markets, case studies reveal that the value of the produce sold is often considerable (Cousins, 2018; Hornby and Cousins, 2019).²⁴

Local government policies and Local Economic Development (LED) programmes could do much more to both support and oversee these informal agricultural markets. However, expanding access to formal markets and value chains by small-scale black farmers who are beneficiaries of land redistribution will continue to be important, especially for high-value commodities.

In relation to some commodities, such as sugar cane and wool, significant numbers of small-scale producers operate as *out-growers* supplying a small number of processing plants or operations. A small number also supply tomatoes *under contract* to Tiger Brands in northern Limpopo and in Matzikama, and there may be potential for such arrangements to be expanded more widely. Contract farming is a major focus of international debates on how to promote smallholder farming, and there are valuable lessons to be drawn from experiences elsewhere, especially on the vexed question of the distribution of both benefits and risks (Losch, 2020; Oya 2012).

In relation to *joint ventures* between private sector companies and small-scale farmers, an approach much favoured by Treasury officials (Steenkamp *et al*, 2019), we found interest in these in Matzikama (mainly in relation to grape production)²⁵ and Greater Tzaneen (for subtropical fruit and nuts)²⁶. It is clear that the majority of such projects implemented to date in South Africa involve large-scale farming systems, very few involve small-scale farmers, and that the experience of these by the majority of beneficiaries is decidedly mixed (Chamberlain and Anseeuw, 2017; Lahiff *et al*, 2012).²⁷ Nevertheless, joint ventures that are appropriately structured may well address some of the challenges facing small-scale producers attempting to enter the lucrative fruit, nut, grape and berry sub-sectors.

To reiterate, in our view appropriate targeting and selection of beneficiaries, commodities and farming systems are the key to a successful land redistribution programme aimed at poverty reduction at a significant scale. The most numerous category of small-scale farmers likely to benefit from such a programme are smallholders, but small-scale commercial farmers are also key, especially in areas where conditions are suitable for capital-intensive farming systems such as fruit, nuts, grapes and fresh vegetable production, and sufficient irrigation water can be made available.

²⁴ In one case, in the Besters area, the combined value of *ilobolo* (bridewealth) cattle and outstanding debts in this regard for 84 households amounted to between 2.7 million and R7 million, at R4973 per beast and *ilobolo* payments ranging from 5 to 15 cattle per marriage per household (Hornby and Cousins, 2019: 211).

²⁵ Mayson *et al*, 2020

²⁶ Bunce, 2020

²⁷ Chamberlain and Anseeuw (2017: 262) note that ‘job opportunities for beneficiaries appear to be limited’, and challenges include that ‘the lack of rewards, whether financial or material, for the smallholder’; financial revenues are often ‘rather low’; few have disbursed any dividends; and rental incomes have been ‘equally disappointing’.

This kind of targeting implies that beneficiary selection must be informed by a sound understanding of both local agricultural potential and of small-scale farming systems. It is vital that officials and others involved in selection processes have these capabilities, and capacity building efforts in this regard are key. In addition, the decentralization of key processes of decision-making will facilitate such selection processes (see section 5.6 below).

We also suggest that government put in place an open and transparent set of procedures for assessing the demand for land and selecting beneficiaries. We note that the recently released draft policy for beneficiary selection and land allocation seeks to ensure equitable access to land; address diverse land needs; promote urban agriculture; create credible and transparent system for land allocation and beneficiary selection; target the rural poor, landless, poor municipalities and peri-urban residents to gain access to land; and create an independent selection panel for land allocation. These are consistent with our recommendations. However, we propose that a clear focus on employment-intensive land redistribution be added to the emerging policy framework.

5.3 Climate change and its potentially negative impacts on agriculture

Policy makers are increasingly aware that climate change is a threat to the sustainability of large-scale, input-intensive commercial farming systems. Might small-scale systems constitute an alternative? The commissioned paper²⁸ on the potential impacts of climate change makes it clear that these have the potential to be highly negative for all scales and forms of agriculture, although the precise nature and timing of these impacts remains uncertain. In particular, proposals to greatly expand the area of land under irrigation, as proposed in the NDP of 2013, may be jeopardized by a growing scarcity of water, increased competition for water between economic sectors, the increasing unreliability and uncertainty of rainfall, and linked changes such as higher temperatures, increased rates of evapotranspiration, increased soil erosion, and so on.

In general, climate change in the direction of both 'hotter and drier' and 'hotter and wetter' futures, in different zones, is likely to make agriculture riskier and less remunerative. In some views, small-scale farmers with smaller reserves of capital are less resilient and less able to adapt in the face of these kinds of changes than large-scale farmers with access to capital who can invest in emerging, climate-smart technologies. Others see potential in building on the adaptation strategies already evident in small-scale farmers' responses to high degrees of variability in climatic or market conditions, such as reducing investment in crops, or even not planting at all during dry-spells, and increasing their focus on livestock production. In times of severe water stress, farmers can adopt water conservation techniques such as water harvesting and recycling for irrigation. Similarly, livestock farmers in dry areas diversify their incomes, shift to livestock species or breeds with higher tolerance for water scarcity and heat, install boreholes, and manage animal mobility in an optimum manner. Mixed farming systems will often be more resilient than specialised, single-commodity systems.

In the long-term, reduced rainfall and declining crop productivity are likely to result in shifts in the smallholder farming sector, increasingly towards livestock production rather than crop cultivation. It is anticipated that an expansion of the Savanna, Succulent Karoo and Nama Karoo biomes will initiate a shift towards hardy, locally-adapted small ruminants (goats and sheep) rather than cattle. This may result in unforeseen ecological impacts, but as yet these remain uncertain.

Producers of small livestock could benefit from new market niches and emerging value, such as goat milk and wool, opportunities for post-harvest processing and/or value addition (e.g. refinement and processing of raw wool products, preserving or processing of goat milk products), and opportunities for the creation of jobs and income opportunities through related value chains (e.g. suppliers of

²⁸ Hunter and Cronin, 2020

inputs and services, abattoir and butchery facilities, cold chain service providers, traders, wholesalers, etc).²⁹

5.4 Constituting appropriately-scaled farming units and securing land rights

The allocation of farm production units of appropriate sizes for land reform beneficiaries has been overlooked by planners to date, who have often taken ‘whole farms’ as they currently exist as their point of departure. Appropriate units of production for small-scale farmers can include shared grazing areas, subdivided crop farming units located on large farms held in common (often with shared grazing areas), or small individual farms. Supply of land in appropriate units should aim to match as closely as possible the nature of the demand for land at district or local municipality level. Area-based planning will be required to ensure a good fit with local realities, and should aim to match supply to demand, as established by transparent beneficiary selection processes.

Three basic models should inform planning and drive processes of allocation and, where needed, subdivision:

- *Shared grazing land*, with clearly delineated beneficiary rights for livestock producers who graze their herds on extensive rangelands and use labour to control herd mobility, including overnight kraaling. Tenure systems on this land can take different forms.
- For crop farmers, a variant of group ownership could involve land transferred to a group of market-oriented farmers with suitable portions allocated to individual farmers through unofficial or official subdivisions. Potential land tenure systems include formal agreements with a landholding entity, or private ownership of cropping areas created by official subdivisions. Private ownership of arable land can be combined with access to shared grazing.
- Many small-scale black commercial farmers see *individualized rights to farm units under their exclusive control* as desirable and empowering. Constituting these could follow official subdivision of large farms into smaller units, at appropriate scales, to meet this demand. This could include units suitable for both crop and livestock producers. Land tenure systems can include both private ownership and state leasehold.

Mixed farming systems which include both cropping and livestock are probably more resilient to climate change, given the greater degree of flexibility offered to farmers as they respond to variable rainfall, droughts, increased temperatures and other shocks. This consideration should inform planning for appropriately sized farm units in suitable locations.

Land tenure is a key variable in land redistribution.³⁰ Our research findings suggest that no one land tenure system can meet the needs of all land redistribution beneficiaries, and that beneficiaries should be offered a choice of options. We note that choice amongst systems was a founding principle of tenure reform in the White Paper on SA Land Policy of 1997 (“tenure reform must allow people to choose the tenure system which is most appropriate to their circumstances”, DLA, 1997: 57).

In general, tenure reform has not removed key obstacles to tenure security in communal tenure systems, or addressed it adequately in new forms of group ownership such as Communal Property Associations and trusts. Problems include dysfunctional governance and elite capture, both of which are made more likely when state support and oversight are ineffective (Mtero *et al*, 2019). Conflict

²⁹ Alcock, Geraci and Cousins, 2020.

³⁰ de Satgé, 2020b.

mitigation is often required in group-based tenure systems.³¹ Problems in the administration of state leasehold are another cause for concern. It is vital that land reform policy and implementation frameworks address these constraints, security of tenure being a precondition for success in employment-intensive land redistribution. Rights should be clearly defined in law and supported in practice by effective and efficient land administration systems³², including those in relation to land use planning and service delivery.

Our empirical research suggests that the following four options would be attractive to market-oriented smallholders and small-scale black commercial farmers:

- Land *held in common*, with the rights of members clearly delineated, can take different forms, including land seen as an extension of neighbouring communal areas and governed by customary norms, values and institutions; a variant of the former, with agreement that market-oriented producers with large herds will be beneficiaries; and shared ownership through a Communal Property Association or trust;
- A *variant of group ownership* involves land being transferred to a group of market-oriented farmers, with portions allocated to individual farmers. Individual allocations can take place through unofficial subdivisions, through formal agreements with the landholding entity (specifying designated usufruct rights or leases), or in private ownership of cropping areas created by official subdivisions, possibly with access to shared grazing held in common;
- For small-scale farmers who seek individualized forms of land right, one option is to *transfer redistributed land in individual title*, following the official subdivision of large farms into smaller units. Policies should make transfer of redistributed land in private ownership subject to the state having the right of first refusal in the event of a subsequent sale of the land, and subject to an agreement that only farm improvements undertaken by the beneficiary will be considered in negotiating a price for the land. This will help ensure that any redistributed land which is sold returns to government for purposes of land reform, and that costs are controlled³³;
- Another option for individualized rights are *state leasehold agreements*. These should be administered by government in an efficient, transparent and accountable manner, and agreed rentals will be neither so low as to be meaningless, nor so high as to be punitive.

The requisite range of options are already available in policies and laws, for the most part, allowing for group ownership, individual ownership, and individual leasehold. Subdivision of larger units of land (e.g. a commercial farm) into smaller units is already allowed on land acquired for land reform purposes. What is required, most urgently, is effective implementation. The only option not fully secured in law is a system of land rights derived from custom, with communal tenure reform continuing to be highly contested.

³¹ Similar challenges exist in the group-based land tenure systems found in former 'coloured' rural areas, that fall under the Transformation of Certain Rural Areas Act 94 of 1998 (TRANCRAA).

³² The Presidential Advisory Panel on Land Reform and Agriculture of 2019 has recently recommended that land administration be constituted as the fourth leg of land reform.

³³ This kind of provision could also apply in a modified form to land transferred to a CPA. Intensively-farmed portions could be transferred in ownership to individual members. but with a clause in the title deed that provides that either other members or the CPA itself enjoys the right of first refusal.

5.5 *Support services to beneficiaries of land redistribution*

Key support services for small-scale farmers (both smallholders and small-scale commercial) who benefit from land redistribution include extension, training and advice, enabling market access, and financial support for both capital investment and running costs.³⁴ Given that ‘one size does NOT fit all’, it is vital that support services be tailored to suit the circumstances, opportunities and constraints of beneficiaries, as well as the different kinds of farming systems used to produce specific commodities.

For example, producers of indigenous breeds of goats on communal rangelands often experience high rates of kid mortality when weaning commences. Farmers need advice on potential solutions, such as creep feeders and feed supplements. In the case of subtropical fruit and nuts, high quality technical advice and the knowledge required to interpret such advice is vital, but recommendations must be adapted to meet the needs of small-scale producers operating less capital-intensive farming systems. Technologies are not always scale-neutral.

We acknowledge that government’s extension services are not effective at present and require a turnaround strategy. We recommend that meeting the needs of small-scale farmers, including beneficiaries of land redistribution, become a major focus in efforts to rejuvenate the extension system. A clear focus on small-scale farming systems will help to develop more appropriate understandings of the specific needs, problems and potentials of the beneficiaries of employment-intensive land redistribution, as well as the larger population of rural households engaged in agriculture. Renewal will necessarily require capacity building and skills development, and in section 5.7 below we offer recommendations on how to approach these challenges. It may also be the case that numbers of extension staff need to be increased, but this will be beside the point unless their effectiveness is improved.

In relation to some commodities (e.g. subtropical fruit and nuts), where government extension staff lack the requisite specialist skills and knowledge, the involvement of the private sector and other non-governmental agencies such as commodity associations will be key for effective service provision. There is reason to suppose that commodity associations and industry trusts are not making as significant a contribution as they might, given the resources available to them. Industry trusts are meant to dedicate a minimum of 20% of their annual expenditure to ‘transformation’. It could be argued that funding and managing high-quality specialized extension could be a stronger strategic focus of their efforts, as opposed, for instance, to funding farmer development projects, which appear to benefit few farmers despite considerable cost.³⁵

5.5.1 *Extension, training and advisory services*

These services should be provided by a mix of state and non-state agencies, depending on which commodities and farming system are being targeted, and whether or not suitable non-state agencies operate in a particular locality. Mapping these agencies at district and local municipality level will be a key responsibility of land reform officials.

For specialised products such as subtropical fruit and nuts, and grapes, which are particularly knowledge-intensive, the services of private sector agencies such as commodity associations and processing companies will be key. They could assist in advising small-scale black commercial producers, and in providing specialised training to government extension staff who are in contact with farmers on a regular basis. Study groups (e.g. those run by the commodity association Subtrop

³⁴ de Satgé, 2020b.

³⁵ Aliber, 2020.

in Limpopo) are a cost-effective mechanism for providing advice and training.³⁶ Business skills such as record keeping, accounting and how to meet the regulatory requirements of certain kinds of markets should be included in such training.

In relation to sugar and wool, experience over many years demonstrates that support service packages for small-scale producers devised and implemented by sugar cane companies and the National Wool Growers Association can be highly effective. Government policy must provide the incentives for their continued provision to wool producers, but on redistributed land as well as communal areas, and for their re-introduction in the sugar sector.

Incentives to commodity associations to provide such services must be provided by government. However, the state must take steps to ensure that the advice and training on offer is appropriate to the needs and constraints of small-scale producers, and not merely generic in character, or a simplified version of the advice offered to large-scale commercial farmers.

For small-scale livestock producers and fresh vegetable growers, we recommend that provincial departments of agriculture be the main providers of extension, advisory and training services, with the assistance of other agencies where appropriate. Useful technical advice is key in relation to animal health and nutrition, and crop health and nutrition, respectively. Information on these aspects of production is relatively easy to transmit to both government extension officers and to farmers, as shown by the Community Animal Health Worker programme in KwaZulu-Natal.³⁷ For small-scale commercial vegetable producers who may be using more capital-intensive irrigation equipment, such as sprinklers or micro-jets, training in irrigation scheduling will also be needed.

A key shortcoming of the existing extension services, however, is not only the sometimes limited technical knowledge of extension officers, but the lack of significant contact time between extension officers and farmers. One partial remedy for this is to promote farmer-to-farmer extension models; however, in the context of redistributive land reform, this will be feasible only where beneficiaries are located in reasonably close proximity to one another.

It is critically important that extension and advisory services are able to inform farmers about strategies to respond to climate change. We recommend that government launch an initiative to develop appropriate policies to promote and support such strategies, and to build capacity amongst extension staff to provide advice on these policies and strategies (see section 5.8 below).

5.5.2 Enabling access to markets and value chains

Support services for beneficiaries of employment-intensive land redistribution must also focus on enabling market access. Small-scale farmers respond quickly to market opportunities, and enhancing beneficiary access to a variety of markets and value chains, including those that are informal, less formal and 'loose' in character, will be vital in the period following establishment of their farms. Local information systems should be developed with the support of commodity associations and the local economic development units of municipalities. In addition, extension officers could contribute and help farmers to obtain market intelligence, and advise on emerging market opportunities such as supplying produce within state procurement systems. However, care must be taken not to overburden extension staff with an ambitious set of functions and responsibilities that dilutes their core advisory role.

As discussed below, policy shifts that see local government bodies providing more recognition and support for informal and less formal agricultural markets would help create an enabling environment for small-scale black farmers. Local economic development programmes offered by municipalities should consider offering suitable physical space within small towns, and on the edges of larger

³⁶ Bunce, 2020b.

³⁷ www.mdukatshani.com

towns and cities, for traders of fresh produce and livestock. They must ensure that health and safety regulations, while observed, do not unduly constrain these markets. These markets will be of particular importance for smallholder farmers, but will be relevant for some small-scale commercial farmers as well, for at least a portion of their produce.

5.5.3 *Financial support for both capital investment and running costs:*

Support agencies that understand the needs and opportunities of small-scale farmers and their production systems are vital for the provision of appropriate and effective financial support, whether for loans or in the provision of grants.³⁸ While government presently spends a great deal of money on grant finance meant to support small-scale farmers, the data show that in practice very few farmers actually benefit from such grants. Moreover, much of this grant finance is deployed in a fashion that does little to promote sustainable farming practices, for example when it comes in the form of costly, in-kind assistance to group-based production projects. Loan finance for small-scale farmers, on the other hand, appears to be even more scarce.

There is an in-principle agreement within government to shift financial assistance to farmers away from grant finance and towards loan finance – perhaps via ‘blended finance’ options – and this shift is welcome. However, the track record of credit provision to small-scale farmers is poor, and especially so in relation to short-term production loans. The problem is not merely that such loan facilities are under-capitalised, but that they have not worked out cost-effective systems enabling them to reach large numbers of farmers, while keeping default rates low. There is also a clear tendency to favour larger-scale black farmers, in terms of both grant and loan finance.

If creating employment is accepted as a key objective, then thought has to be given not only to how to fund but to *what* to fund. Funding the acquisition of labour-displacing machinery and chemicals should be discouraged, even if this kind of support is sometimes the expressed preference of farmers.

Suitable financing arrangements that include a mix of grants and loans will help capitalise small-scale farming systems and support farmers to purchase annual inputs. Assuming that at some stage the pace of redistribution accelerates, it is vital that these arrangements are efficient. The situation at present is that the delivery of material support to small-scale farmers is cumbersome and expensive, in part because it is organised via government’s supply chain management systems, and often involves intermediaries or ‘middlemen’. For these and other reasons a general shift towards greater reliance on loan finance is desirable; however, it is also unwise to burden small-scale land reform beneficiaries with excessive amounts of debt, lest it undermine their sustainability. At the same time, however redistribution beneficiaries are funded, it is not necessary that they achieve their full production potential from the very first year of support. Rather, support will be partial, and that beneficiary farmers will move towards achieving their and their farms’ full potential over time.

One possibility is to establish a ‘land reform start-up grant’ which entitles beneficiaries to grant support up to a fixed ceiling, or perhaps up to a ceiling that varies according to commodity. Either way, there is merit in moving away from a system that requires intensive, case-by-case scrutiny and discretion. Such grant funding would be aimed at farm improvements and basic equipment, and in the spirit of blended finance, could also be used to leverage loan finance, in particular from state-supported institutions such as the Land Bank. Beyond this, there is a need to dramatically scale up subsidised production loans, while confronting the limitations of current practices.

³⁸ Aliber, 2020.

5.6 *Institutional frameworks for implementation and support*

To counter the tendency to pursue inappropriate ‘one size fits all’ policies and programmes, we propose a continued emphasis on the decentralisation of land reform, in relation to how land is transferred and in the provision of support services. District Land Committees (DLCs) should be at the centre of these efforts, working closely with teams based in local municipalities. They should aim to create locality-based alliances and knowledge partnerships between small-scale producers, commercial farmers, commodity organisations, NGOs, researchers and tertiary institutions, based on sound analysis and agreed solutions. Where decentralised approaches are effective, they should combine a mix of front-end planning, extension and advisory services at local municipality scale which are backed by district/ provincial/ national ‘back office’ support services which collect, analyse and disseminate data. Planning must also be guided by a clear set of national policies, and the national office needs to both support local-level efforts and also monitor and evaluate the impacts of local-level processes.

This framework, which connects local help desks backed with a network of knowledge platforms using adequate information and communication technologies (ICTs), is becoming a major reference in international debates about support to farmers. It is being adopted in many countries as part of the modernization and reshaping of old-style top-down extension services.³⁹

5.6.1 *‘Know the farmer’ methodology*

Providing front-end support services to land reform beneficiaries should be premised on a ‘know the farmer’ methodology, which:

- collects and shares data of those already involved in agricultural production, based on an agreed typology of producers;
- allows for much clearer understanding of the needs and aspirations of the people seeking to acquire land for different purposes;
- provides a baseline for planning and monitoring;
- identifies and profiles existing local organisations and associations representing small-scale black producers;
- identifies and profiles local commodity associations, as well as other state and non-state support organisations;
- maps commodity value chains and assesses informal and formal market opportunities; and
- develops risk profiles of beneficiaries, highlighting their vulnerability to climate and water shocks as a basis for the co-design of risk mitigation strategies.

5.6.2 *Local land reform audits*

One of the core functions of a DLC must be to conduct an audit of land within each local municipality. This should include data on existing development initiatives and land reform projects. DLCs need to be supported to undertake a baseline survey or census of smallholder producers and small-scale commercial farmers as a basis for planning future support strategies and identifying priority land allocation needs. This would assist in matching supply and demand for land at local level (see section 5.1 above on beneficiary selection).

The land audit could also help identify land suitable for purchase, development and subdivision in order to meet land reform objectives. The audit would result in an inventory of land zoned for agriculture or acquired for land reform in private and public ownership, including commonage land

³⁹ Losch, 2020.

owned by municipalities and state land held by other government departments such as Forestry and Public Works. The land audit would enable the specification of priorities for new land acquisition and options for subdivision at different scales (see section 5.4 above on the allocation of appropriate farm units). Audit teams should aim to metamorphose themselves over time into support teams, which develop the skills and expertise required to work effectively within their specific land reform settings.

5.6.3 Area-based District and Local Municipality Land Reform Plans

DLCs should also oversee the development of District and Local Municipality Land Reform Plans that are area based, and prepared in direct and intensive consultation with relevant actors. They should be implemented through partnerships between different spheres of government, the private sector, non-governmental organisations (NGOs), and community-based organisations (CBOs) where appropriate. These agencies should agree on essential capacity requirements, and how the plans will be costed, budgeted and funded. The plan will cluster projects and initiatives and specify the nature of the support to be provided within the limits of available budgetary allocations. Given the constrained nature of state budgets and capacity, there is likely to be a significant deficit in state support. Ways to address this deficit will need to be addressed through other mechanisms, including incentives for the private sector, donor funded programmes and partnerships with NGOs.

5.6.4 Pilot programme to capacitate District Land Reform Committees and find solutions to the co-ordination impasse

DLCs able to effectively co-ordinate the actions of a range of relevant stakeholders will be key. Currently, co-ordination is not the responsibility of any one single government institution. A programme of pilots in selected local municipalities in which joint action is taken to produce and implement a set of practical, multi-year plans and budgets, is recommended. This may assist in seeking solutions to the co-ordination impasse that besets land reform at present. These should involve both public and private sector agencies. These pilots could be staffed by the first graduates of the capacity-building 'crash programme' discussed in section 5.7 below.

The aim of the pilots must be to learn lessons on how to create multi-actor DLCs that effectively align and co-ordinate programmes in support of land reform, rural development and small-scale farmer development. Core teams at DLC level could liaise with smaller teams at local municipal level. Relevant non-state actors include commodity associations, financial institutions, development-oriented NGOs and organised agriculture, together with local producer groupings and civil society organisations. DLCs will require high level political support from the Minister and the Director-General of the department, as well as provincial MECs, and dedicated budgets to enable the participation of non-state actors and the contracting-in of essential support services where required, as well as strong and knowledgeable managers.

5.7 Capacity building for employment-intensive land redistribution

Implementation of any set of policies and programmes requires relevant skills, knowledge and expertise. Policies and programmes to build government capacity for small-scale farmer support are crucially important for a land redistribution focused on employment-intensive farming systems. Building capacity requires time, however, and interventions are required to help secure the success of land reform beneficiaries in the short-term.

Over the *medium- to long-term*, capacity building can be undertaken using a mix of approaches, including:

- Improving the quality of the basic training received by agriculturalists, with particular emphasis on understanding the particular characteristics of small-scale farmers. This will involve both a systematic review of curricula and a programme to 'train the trainers';

- Creating an effective system of in-service training of government officials, probably in partnership with higher education institutions. (It may be that valuable lessons can be drawn from the successful programme of in-service training undertaken in Zimbabwe after independence in 1980);
- Field methods that emphasize action-research and co-learning with beneficiaries (as documented in the successful ‘Farmer-First’ initiative of the past thirty years, and as successfully implemented in KwaZulu-Natal by the Mdukatshani Rural Development Programme)⁴⁰;
- Government officials can benefit from working closely with NGOs, commodity associations and other non-state actors with relevant knowledge and experience;
- Building capacity to assist farmers to adapt to climate change and engage in strategies to mitigate risk is now an urgent priority, and both basic and in-service training must incorporate emerging knowledge and approaches;
- Training of the officials who are to implement land reform in the basics of agriculture, focused in particular on commodities produced in their particular provinces.

Land reform also urgently needs *short-term interventions* to enhance the existing capacity of officials to promote employment-intensive commodities and farming systems (it is noted that many officials in the former Department of Rural Development and Land Reform have little or no understanding of agriculture at any scale). We recommend a two-year ‘crash programme’ to build capacity and pilot the implementation of the policies proposed in this report. In brief, this would involve:

- Producing a ‘Practical Guide to Small-scale Farming Systems in South Africa’, or perhaps separate guides per individual commodity, over the first 12 months of the programme. These would form the basis of a training curriculum;
- Training around 40 to 50 land reform extension officers to provide them with the required skills and knowledge to support small-scale farmers receiving land via land redistribution. Full-time training would take place over a minimum of 6 months and a maximum of 12 months;
- Posting the trained land reform extension officers to District Municipalities, and involving them in local-level land audits, as well as planning an employment-intensive land redistribution programme for the district and its various local municipalities;
- Thereafter, training 20 officials per year in relevant skills and knowledge, until the total number of trainees allows them to be posted to each local municipality in the country.

Such a programme need not require the creation of new government posts, but rather the re-deployment of existing staff, mostly from the provincial departments of agriculture, but also the Department of Land Reform and Rural Development.

6 Complementary policy reforms

Some constraints on small-scale farming arise from problems in the policies and practices of other sectors and government departments. Addressing these is vital to the success of an employment-intensive programme of land redistribution.

⁴⁰ See www.mdukatshani.com

6.1 *Local government support for agricultural markets*

Local government bodies such as district and local municipalities provide little support to informal agricultural markets and those participating in loose value chains. Some are actively hostile and discourage their use of open space in urban areas, preferring to prioritise investment in large retail chains and shopping malls. Local government could do much more to support, promote and oversee small, medium and micro enterprises.

Municipalities have a constitutional mandate to support local economic development, promote market access and regulate markets in an appropriate manner (De Visser, 2019). Their legislative competencies include provisions for the regulation of markets, including street trading. As such, they can facilitate food trade activities in informal settlements and support local food producers and traders through municipal markets, as well as supporting large retailers.

Support for the informal sector must, of course, be balanced by appropriate regulation, e.g. in relation to health and safety. But regulatory frameworks should be assessed to determine if they are appropriate in contexts where key priorities include support for local economic development and employment-intensive enterprises, and revised and adjusted if needs be. Flexible national policy frameworks are key, and the Department of Co-operative Government and Traditional Authority (COGTA) and the South African Local Government Association (SALGA) should help to develop and promote such frameworks.

6.2 *Water provision and water allocation reform*

Given that access to water for irrigation is essential for many high-value crops, improvements in water provision are a key enabling condition for employment-intensive land redistribution. As examples from Greater Tzaneen and Matzikama show clearly, maintaining existing dams that supply water to farmers, or increasing the capacity of such dams, is critically important for crops such as subtropical fruit, nuts and grapes, as well as fresh vegetables.

In addition, the fact that water allocation reform continues to be disconnected from land reform is a major constraint on employment-intensive land redistribution. Policy must ensure that the water rights of previous owners are transferred along with their land. At present the water allocation process is slow and cumbersome, involving long drawn-out processes of ‘verification and validation’, that often result in land reform beneficiaries being unable to access the irrigation water that they need.

6.3 *Environmental management and climate change*

In order to address the consequences of climate change, interventions that address policies, technologies, knowledge management and financial instruments are key.⁴¹ An employment-intensive land reform can form part of the sustainability agenda adopted by South Africa. It can support farming systems which contribute to natural resources and landscape management through improved agricultural practices, and thus provide key environmental services. Implementation would benefit from closer relations between government departments, developing synergies between land reform and the imperative of improved environmental management.

6.3.1 *Policies*

National and sub-national policies should be developed that enable the adaptation of farming systems to climate change impacts such as long-term droughts. These include the improvement of access and rights to water through water allocation reform, farmer-led and community-managed irrigation systems and rain-water harvesting; promoting collective-action strategies, such as the pooling of financial resources or facilities; subsidies and incentives for crop substitution and farming

⁴¹ Hunter and Cronin, 2020.

inputs (e.g. livestock vaccines); and improved food system infrastructure (e.g. cold chain and transport facilities). Given the probability of long-term shifts to small ruminants (goats and sheep), support services for these livestock farming systems and their associated value chains should be a priority. Consideration should also be given to policies that pay farmers for environmental services.

6.3.2 Technologies:

Climate-resilient technologies and practices that have been identified and developed for small-scale farmers include water-efficient irrigation technologies and strategies, deficit irrigation (irrigation applied only during drought-sensitive growth stages) and solar micro-irrigation. Stress tolerance in crops and livestock should become a key focus of research, with the promotion of improved breeding stock, especially for goats and sheep, through both conventional selective breeding programmes and biotechnology. The focus of crop and livestock improvement programmes should include resistance to heat, drought, waterlogging and pests and diseases, and the potential of under-utilised but hardy indigenous breeds and traditional crops.

6.3.3 Knowledge management and networks

Strengthening resilience through promoting knowledge management includes both macro-level practices (e.g. practical training for farmers and extension officers) and micro-level practices (e.g. the use of decision support systems and seasonal climate forecasts). It should include the establishment or strengthening of networks and organisations that facilitate coordination between stakeholders. These may take the form of farmers groups, field schools or study groups, and build on existing structures such as faith-based organisations, women's groups, etc. Other forms of network and knowledge-based interventions relate to the management of technical or sector-specific knowledge, such as systems for the management of irrigation water, or forecasts generated by hydro-meteorological monitoring networks.

6.3.4 Financial instruments:

Index insurance products deliver compensation pay-outs to insured farmers for losses to a crop or asset, based on a predetermined index, e.g. for rainfall levels, average area yield or livestock mortality rates. We suggest that these be investigated for small-scale commercial farmers engaged in production of high-value produce. Payment for environmental services, if adopted as general policy by government, would benefit small-scale farmers as well as rural communities more generally. It would help make small-scale farming more profitable, and thus support an employment-intensive form of land redistribution.⁴²

6.4 State procurement of small-scale farmers' products

If state procurement policies were to target small-scale farmers, for example in contracting them to supply farm produce to the National School Nutrition Programme, this would also assist land reform beneficiaries whose farming systems are employment intensive.

6.5 Improving data collection on agriculture and small-scale farming in particular

More detailed statistics on agriculture in general, and on small-scale farming in particular, are essential for policy making and planning. Yet these are often lacking in South Africa, which is somewhat inexplicable given the research capacity of the country. We recommend that Statistics South Africa review its approach to the agricultural sector, and seek to develop a sound national data base on small-scale farmers that informs land reform, agricultural and rural development policies.

⁴² Losch, 2020, citing international experience.

7 Strategic choices and trade-offs in employment-intensive land redistribution policies

Policy-makers often have to confront invidious choices and the trade-offs that they involve. Here we consider two kinds of trade-offs and their implications for land redistribution policy. The first is in relation to the capital costs of land redistribution versus its employment intensity. The second is in relation to the number of jobs that can be generated versus the level of wages paid to workers.

7.1 Capital intensity versus employment intensity

Expanding employment-intensive, small-scale systems of farming can involve high levels of capital investment, as in the case of subtropical fruit and nuts, and grapes. These include the costs of acquiring high potential agricultural land, as well as investments in trees and other forms of planting material, equipment and infrastructure (including for irrigation). Input costs are also often high, given market requirements for produce free of blemishes, and pumping water requires electricity, the costs of which are rising rapidly.

Low-cost and much less capital-intensive farming systems such as extensive livestock are feasible on a large scale, given that much of South Africa is suitable only for grazing, but are also less employment-intensive.⁴³ Some systems of vegetable production are also less capital intensive than others, for example, using hand tools and small, low-cost pumps and gravity-fed irrigation technologies.

Between these two extremes lie intermediate systems, with medium levels of capital intensity but relatively high employment-generation potential, such as small-scale commercial vegetable production using pumped water, and labour, rather than machinery and equipment, for operations such as weeding. Small-scale farmer production of wool from sheep on communal grazing, using improved breeds and packing sheds, generates improved incomes for farmers but not a great deal of additional employment.

A schematic representation of these trade-offs is shown in Table 2. Unfortunately, our data are too imprecise or context-specific to allow clear categories based on monetary measures of capital intensity to be suggested. However, these distinctions appear to make sense, at least at the conceptual level, and may help in thinking about strategic choices and trade-offs.

Table 2: Capital-intensity and employment-generation potential of small-scale farmers

	Commodity and farming system	Employment generation potential per hectare
Low capital intensity	Extensive livestock	Livestock: low
	Smallholder vegetable production (using hand tools, small-scale pumps or gravity-fed irrigation)	Vegetables: high
Medium capital intensity	Wool (improved breeds, collective packing sheds)	Wool: low
	Smallholder sugar cane	Sugar cane: high
	Small-scale commercial vegetable production (using pumped irrigation water and labour-intensive methods)	Vegetables: high

⁴³ However, this is context specific; as the Matzikama case study shows, costs can outweigh benefits if large areas of extensive rangeland have to be acquired at market-related prices.

	Commodity and farming system	Employment generation potential per hectare
High capital intensity	Small-scale commercial vegetable production (using pumped irrigation water & machinery and equipment e.g. tractors)	Vegetables: medium to high
	Fruit, nuts, berries	Fruit, nuts, berries: high
	Grapes	Grapes: high

Some key costs, such as land acquisition, will probably have to be borne wholly by the state, as will grants to land reform beneficiaries to help establish their enterprises, for instance for on-farm infrastructure and basic equipment.⁴⁴ The private sector could play a role in meeting other costs, as in providing specialised extension and advisory services to small-scale farmers producing commodities such as subtropical fruit and nuts.⁴⁵ If mutually beneficial joint ventures or partnerships are agreed, as discussed in the local municipality study in Greater Tzaneen, private sector partners could help meet some establishment costs. Levels of state support required to help establish the different commodities and associated farming systems will clearly vary, depending on local circumstances, but also in accordance with the particular combinations of options selected.

The availability of state funds, as well as the willingness of private sector or other non-state agencies to contribute, will influence the degree of support that can be provided in practice. This suggests that key trade-offs between options will have to be considered, especially in the light of the severe fiscal constraints experienced by government at present. However, at the present time a strong focus on two farming systems of relatively low capital intensity is warranted, in our view: extensive livestock and smallholder vegetable production.

A strategic focus in land redistribution on *extensive livestock production* makes a great deal of sense. As discussed in section 5.2 above, the bulk of the land surface in rural South Africa is suitable for livestock farming and not for cropping. In addition, shifts in the composition of herds owned by black farmers in communal areas are occurring, away from cattle to goats, which are predominantly browsers of woody plants, and goats tend to require more herding than large stock. The livestock production systems of small-scale black farmers are thus becoming more labour intensive. There is also potential to expand wool production by small-scale farmers. These are sound reasons for promoting extensive livestock production, with a focus on small stock in particular, within land redistribution. Climate change and the adaptive responses it is prompting reinforce the need for this kind of emphasis.

In general, the costs of acquiring land for extensive livestock production are lower, an important consideration for a fiscally constrained state. However, the examples of Matzikama and Sakhisizwe suggest that this is not necessarily the case in all areas, and the cost of acquiring extensive rangeland versus the small number of net jobs created may render this option less attractive in some localities.

These considerations suggest that the agricultural sector in South Africa in general needs to consider the wider implications of current processes of change. Drought and bush encroachment mean that

⁴⁴ There is evidence to suggest that under the Proactive Land Acquisition Strategy (PLAS) and the Recapitalisation and Agricultural Development Programme (RADP), per-beneficiary expenditure was often extravagant. This should be avoided.

⁴⁵ It may be that some land for redistribution will be donated by landowners in future, as suggested by the Presidential Advisory Panel's report.

indigenous breeds of goats and sheep are likely to increase in importance over time. Without using grazing land more intensively, much of it will revert to bush and become unusable for cattle farming. Goat and sheep production would result in the more efficient utilisation of low-value land, and create important new opportunities for black farmers, whether land reform beneficiaries or not. The relatively low barriers to entry into extensive livestock production by black farmers is another key factor to consider, along with the lucrative new value chains that could come into being.⁴⁶ Instead of importing one million goats per annum from Namibia, as at present, relatively ‘soft’ restrictions on such imports would assist in expanding the market for domestic production. Technical research on how best to commercialise production using indigenous breeds is urgently required.

In relation to *fresh vegetable production by smallholder farmers*, the relatively low levels of capital investment required for this highly labour-intensive farming system make it an attractive option. Markets are key, of course, but if demand for fresh vegetables continues to increase, then this may not prove to be a major constraint. A real constraint, however, is the availability of water for irrigation, with climate change bound to increase the uncertainty of water supplies. For this reason, the commodity study of fresh vegetables⁴⁷ argues that land redistribution will need to go hand in hand with an equitable division of water rights and improving water management. Alternatives to expensive large-scale irrigation schemes, including farmer-led systems, could provide a sustainable use of this scarce resource.

Farmer-led irrigation development is defined as ‘a process where farmers assume a driving role in improving their water-use for agriculture by bringing about changes in knowledge production, technology use, investment patterns and market linkages, and the governance of land and water’ (Woodhouse *et al.*, 2017: 225). It involves a range of scales of production, from small homestead gardens to collective and individual field plots, and uses a variety of water sources and water harvesting methods, including dams, rivers, streams and wells. Diverse technologies can be combined, such as water cans, buckets, pipes, canals, small-scale pumps, contour ridges and run-off strips for rainwater harvesting. Scoones *et al* (2019) provide evidence on the widespread use of these kinds of farmer-led irrigation in Zimbabwe’s land reform.

In South Africa, the scale of farmer-led irrigation is often surprisingly large. As van Koppen *et al* (2017) show for the Mopani District, ‘the area under informal irrigation is three to four times as large as the area equipped in public irrigation schemes’. We recommend that a land redistribution programme seeking to promote labour-intensive farming systems actively promote farmer-led irrigation - not to the exclusion of more conventional approaches, but to widen the range of options available to beneficiaries.

7.2 Jobs versus wages

Another trade-off that must be considered by policy makers is that between jobs and wages. Labour legislation in South Africa regulates labour conditions (e.g. worked hours per week, health and safety, the provision of benefits, etc) for employees and specifies a minimum wage, which for the agricultural sector is a little less than the general rate. It is well-known that enforcing these provisions on large-scale commercial farms often proves difficult (Visser and Ferrer, 2015, Devereux *et al*, 2017).

Enforcement on the large number of farms operated by small-scale, black farmers would be even more difficult if it were to be attempted. Our case studies reveal that hired workers on small-scale farms are often paid well below statutory rates. This is the case, for example, for many herders

⁴⁶ Alcock, Geraci and Cousins, 2020.

⁴⁷ Bunce, 2020a.

employed by livestock farmers. And it may well be the case that many land reform beneficiaries do not pay the level of wages that the law requires.

In our view, land reform policies must take into account the reality of small-scale farming in South Africa. Our local municipality studies confirm that many small-scale producers are part-time farmers, and rely on a mix of family and non-kin labourers, for whom payment often includes in-kind payments, not only cash. Small-scale farmers often practise multiple livelihood strategies, and agriculture is not necessarily their only source of income (section 5.1 above).

If land redistribution beneficiaries are required to adhere strictly to current labour legislation, then their profitability is likely to be adversely affected. They will be forced to rely increasingly on non-farm sources of income. Or they will ignore the law, and enter into informal contractual arrangements with their farm workers, influenced by local norms. For workers, similar considerations apply.

Adapting existing legislation to the reality of highly differentiated types of farming deserves the attention of policy makers. In our view, the political necessity of land reform, combined with the feasibility of net job creation through a focus on small-scale agriculture, in a context where levels of unemployment are extraordinarily high, suggests that labour policies must be adapted to these realities. They could include adopting legal definitions of small-scale farming that allow more flexible labour conditions than on large-scale farms.⁴⁸ The goal of creating 'decent work' in agriculture must be retained, and its feasibility enhanced through implementing effective support policies for small-scale farmers that enhance their profitability. Taken together, these could also provide impetus for the collection of detailed and accurate data that allow for an accurate characterization of small-scale farming in South Africa (see section 5.8 above).

8 Conclusion

Despite its many limitations, this study has broken new ground by investigating the potential of small-scale farming for employment generation in specific locations. The local municipality studies have made use of relevant expertise and experience in assessing this potential, and the findings suggest strongly that at least in these localities, real gains in employment intensity are possible.

The extent to which the findings can be generalised to other localities with similar agro-ecological characteristics is clearly debateable, given the evident variability in land prices, employment potentials per ha and the accessibility of different markets across the four selected local municipalities. But the projected gains in employment-intensity that result from the creation of a much large number of more labour-intensive and small-scale farms that our estimates suggest is feasible means that, at very least, this option is worth exploring in more detail.

We strongly recommend that government, perhaps with donor support, launch a small number of pilot programmes to investigate the policies that we recommend in this report.

⁴⁸ This is a policy stance that has been adopted in many countries, including developing countries in Latin America and West Africa (Marques and Ramos, 2012, Bélières *et al*, 2015).

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Appendix 1: Bases for estimating the cost of creating jobs through employment-intensive land redistribution

Inkosi Langalibalele						
Land types	Ha/farm	Cost/ha	Farms	Land cost (Rm)	Gross jobs	Net jobs
Drakensberg grassland: livestock	350	10000	87	304.5	609	522
Midlands grass and savannah: livestock	528	3000	80	126.7	560	480
Bush and thicket: livestock	1076	800	65	56.0	455	390
Irrigated vegetables commercial	20	150000	12	36.0	356	254
Irrigated vegetables smallholders	6	150000	79	71.1	710	576
Total land			323	594.3	2690	2222

Item	Units	Cost/unit	Total
Cattle	5800	7250	42.1
Goats	34800	1200	41.8
Goat dips	20	20000	0.4
Setup 20 ha irrigated farms	12	1250280	15.0
Setup 6 ha irrigated farms	79	375084	29.6
Total other			128.8

Greater Tzaneen						
Land types	Ha/farm	Cost/ha	Farms	Land cost (Rm)	Gross jobs	Net jobs
High potential arable: commercial farmers	40.0	65183	25	65.2	284	197
High potential arable: smallholder formal markets	22.5	65183	47	68.9	445	358
Low-moderate potential: commercial farmers	881.3	65183	4	229.8	190	31
Low-moderate potential: smallholders all markets	535.0	65183	12	418.5	286	75
Low-moderate potential: smallholders informal markets	299.1	65183	52	1013.9	510	283
Moderate potential: commercial farmers	40.0	65183	300	782.2	3328	2526
Moderate potential: smallholder formal markets	17.5	65183	686	782.5	4770	3968
Moderate potential: smallholder informal markets	10.0	65183	1200	782.2	8083	7281

Non-arable: commercial farmers	60.0	65183	33	129.1	710	417
Non-arable: smallholder all markets	35.0	65183	86	196.2	1229	761
Non-arable: smallholder informal markets	10.0	65183	300	195.5	1773	1305
Total land			2745	4664.0	21608	17202

Items	Units	Cost/unit	Total (Rm)
New orchards	13495	124992	1686.8
Establishment vegetables	13495	62524	843.8
Dips	4	20000	0.1
Fencing for kraals	68	4000	0.3
50% sheep & goats	1230	7225	8.9
Total other			2539.8

Matzikama						
Land types	Ha/farm	Cost/ha	Farms	Land cost (Rm)	Gross jobs	Net jobs
Irrigation-based small-scale farmer	6	144375	249	216.0	1763	1763
Irrigation-based larger-scale farmer	20	144375	299	864.1	6084	1213
Extensive grazing commonage	500	1500	102	76.2	55	55
Extensive grazing individual plots	3000	1500	152	685.9	491	167
Total land			803	1842.2	8393	3198

Items	Units	Cost/unit	Total (Rm)
Set-up small-scale irrigation farmers	249	321000	80.0
Set-up larger-scale irrigation farmers	299	805000	240.9
50% of sheep for commonage farmers	2839	1000	2.8
50% of sheep for individual-plot farmers	25384	1000	25.4
Total other			349.2

Sakhisizwe						
Land types	Ha/farm	Cost/ha	Farms	Land cost (Rm)	Gross jobs	Net jobs
Grazing	200	5000	258	257.9	154	115
Maize	50	17000	114	96.6	717	660
Vegetables	10	40000	26	10.4	297	294
Total land			398	365.0	1168	1069

Items	Units	Cost/unit	Total (Rm)
Fencing: kraals	258	4000	1.0
Breeding stock	8600	2000	17.2
Fencing: maize	114	54000	6.2
Tractors & related	114	440000	50.2
Fencing: vegetables	26	25137	0.7
Irrigation adjustment	26	100000	2.6
Tractors & related: vegetables	26	350000	9.1
Bakkie	26	150000	3.9
Total other			90.8