RULES OF THE GAME: LAND TENURE AND THE COMMERCIALISATION OF SMALLHOLDER AGRICULTURE

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SUMMARY

The debate on land tenure has reached an *impasse*. A nationalist narrative based on the customary tenure system and state control over agricultural land has taken root. The purpose of this paper is to move the debate towards a more developmental approach that focuses primarily on reducing poverty in communal and resettlement areas. History, of course, matters. The paper therefore begins by providing a brief stylised account of how land rights evolved. It then presents an economic critique of how smallholders have become entrapped in a tenure and farming system which offers neither them nor their children much hope of escaping a life of poverty. From there, the paper presents an alternative land tenure policy and institutional framework as a foundation for reducing poverty by commercialising smallholder production. It posits two main arguments. The first is that security of tenure is a necessary condition for the commercialisation of agriculture, but not a sufficient one. Efficient smallholder farm production and commercialisation also require the transferability of property.[1] The second argument is that enclosing common property or converting it into individual holdings is a necessary step towards ensuring environmental sustainability.

1. THE EVOLUTION OF PROPERTY RIGHTS

Esther Boserup – in her classic exposition, *The Conditions of Agricultural Growth* – showed how the pressure of population on land drives changes both to property rights *and* technical innovation, leading to agricultural intensification and growth. She argued that as populations grew and land became relatively scarce, it first became necessary to use more labour to maintain production levels. Then, as population continued to grow, production levels could

[1] In a subsequent and final paper, I show that both security and transferability are required for the structural transformation of the economy and to protect the poor.

only be maintained by introducing technical innovations such as crop rotation and, later, by applying fertilizers and hybrid seeds varieties. However, Boserup made the crucial point that this process of *technical* intensification was necessarily accompanied by the *institutional* evolution of land rights. In other words, whereas initially households were allowed only to continuously cultivate land, they were later able to bequeath and sell it. Eventually, this evolutionary process of institutional development produces a unified system of land documentation and registration, backed up by the state's enforcement of property rights.

My central argument is that the customary system of tenure, which worked perfectly adequately in a pre-industrial era when the country was sparsely populated, has not been allowed to evolve. Customary rules have been frozen in time, first by the Rhodesian authorities and later by the Zimbabwe government. The fundamental problem is that population growth has not been accompanied by the necessary changes in the rules governing property rights to maintain productivity. As a result, technological innovations have not only failed to take hold in communal areas, but under conditions of population pressure, capital is eventually squeezed out of the agricultural system. Inevitably, most communal areas have stagnated into pools of poverty that are environmentally unsustainable. And worse, the spread of this tenure system into the resettlement areas will eventually reproduce the very poverty and environmental degradation we see in the communal areas.

2. WHAT'S THE PROBLEM?

Start with population. As estimated 1.2 million households – nearly half Zimbabwe's population – live in the communal areas[2] which cover 16.4 million hectares, or about half of Zimbabwe's agricultural land.[3] The defining feature of these areas is a customary land tenure system whereby local leaders allocate arable land to households and their families on a usufruct basis.[4] This means that households have use rights, but no rights to rent or sell their land. Another defining feature is that households are entitled to use common property resources, such as water for household use and irrigation, woodlands for firewood and building, and pastures for grazing cattle and other livestock. So, what's the problem? There is no problem when the population is very low. But when the customary system is faced with an unprecedented growth in population and livestock numbers, debilitating diseconomies make themselves felt in the absence of changes to property rights. So how does the system conspire to perpetuate poverty?

[2] Zimstat (2013) *Men and Women in Zimbabwe*, Zimbabwe National Statistic Agency: Harare

[3] Zimbabwe (2003) *Report of the Presidential Land Review Committee,* Vol.1 (Main Report) Under the chairmanship of Dr. Charles Utete: Harare. (Table 5; p.42)

[4] Although the Communal Areas Act 1982 grants authority of land allocation to the rural district council, the power to allocate land often remains vested in traditional leaders.

2.1 ARABLE LAND

First consider arable land. Because it is allocated rather than sold, the system grants households access to land for cultivation that carries no cost to the user. In other words, land use is fully subsidised. This may seem like an advantage. But in the absence of a price mechanism or market signal, there is nothing to constrain demand for this limited and scare resource.[5] This has four economic ramifications. First, it distorts the allocation of inputs (factors of production) which reduces the efficiency of farm production. Second, an ever-growing population under a traditional system of inheritance sees plots being continually subdivided into smaller and less viable units of production. Third, when most of the best land has been occupied, families in search of land spill over into more marginal areas, leaving in their trail exhausted soils and a denuded landscape. And, fourth, the usufruct basis of communal land rights precludes the use of land as collateral, thus restricting the ability of communal households to gain access to credit.

Let us consider in a little more detail how these processes create inefficiencies, squeeze out capital, and perpetuate poverty.

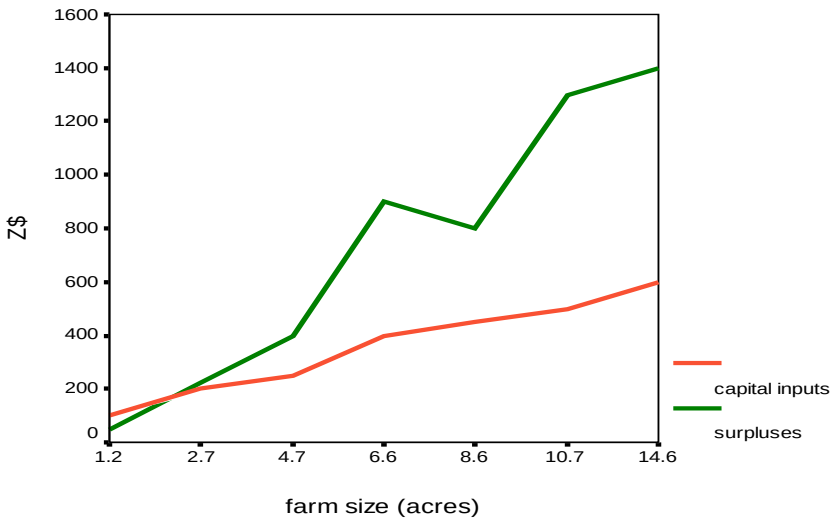
The economic principle of optimal factor combination[6] holds that the efficiency of farm production requires land, labour and capital inputs (the factors of production) to be used in such proportions that output is maximized for a given cost.[7] But, because land is free and labour is *relatively* much cheaper than capital, households will prefer to cultivate more land rather than using capital – notably fertilizer – thus reducing soil fertility. This inherent bias against capital inputs is aggravated by population growth. Because the tenure system offers no mechanism for farmers to consolidate plots into larger more viable units, plots are gradually subdivided into smaller and less viable holdings. The result is obvious, as Figure 1 shows. As plots get smaller, households' farm surpluses and cash earning gradually fall. With less cash to buy fertilizer, improved seed and equipment, output falls still further. Households thus remain trapped in a subsistence farming system that is underpinned by customary tenure.

[5] Economic demand is based on the market price of land rather than the 'need' for land.

[6] This principle is also is known as the law of variable factor proportions.

[7] In economic parlance, these factors or inputs should be combined so that the ratios between their marginal productivities and costs are equal. The marginal productivity is an economic term used to measure the unit *increase* in output (e.g. bags of maize), for each addition unit of a factor of production (such as fertiliser) that is used.

Figure 1 Capital inputs and surpluses by farm size



Source: Doré, 1993[8]

But the problem does not end there. As the relentless pressure of population on the land is felt, poor families start migrating into more marginal farming areas in search of land to cultivate. Here, the impact is even more perilous for livelihoods and the environment. Because of the higher risk of crop failure in these drier more marginal areas, households reduce their use of capital inputs (fertilizer) still further. Soils gradually become exhausted and households are compelled to move on, clearing more woodland and opening up even more marginal land that is even less suitable for cultivation. In this way, the agricultural system sets in motion a debilitating process of deforestation, extensive cultivation, and environmental degradation.[9]

The remaining possibility is to infuse the farming system with desperately needed capital by securing loans to purchase inputs. But this possibility is also precluded by the customary tenure system. Because land cannot be transferred through sales or leases, smallholders are unable to use the inherent collateral value of their land to access credit. This leaves most smallholders dependent on the government and donors for inputs and collective capital assets (e.g. irrigation schemes); and, in the event of crop failure, food handouts and cash transfers.

[8] Doré, D. (1993) *Land Tenure and the Economics of Rural Transformation: A Study of Strategies to Relieve Land Pressure and Poverty in the Communal Areas of Zimbabwe.* D.Phil: Oxford University. (p.179)

[9] Lele, U. and S.Stone (1989) *Population Pressure, the Environment and Agricultural Intensification.* MADIA Discussion Paper 4. World Bank: Washington, D.C.

2.2 COMMON PROPERTY RESOURCES

Even so, the problem of cultivating land tells only half of a woeful story. The other half concerns the unsustainable use of natural resources held in common. Because communal grazing land is a free resource that carries no cost to the user, livestock owners have a perverse incentive to maximise their benefit by always increasing their use of common grazing areas. In other words, they will continue to add *more* cattle on already degraded grazing areas, thus quickening the pace towards environmental decline—and undermining the very resource base on which their livelihoods depend. In his classic paper, Hardin coined the resonant and often-quoted phase, "the tragedy of the commons". He famously described the remorseless unfolding of this process of environmental degradation, thus:

> Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination towards which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.[10]

Despite an extensive literature challenging Hardin's idea (see for example Daniel Bromley's *Making the Commons Work* and Nobel Prize winner Elinor Ostrom's *Governing the Commons*), the theory that communities can cooperate by devising rules for the sustainable management of their common property has made little headway. The reason is simply that the powerful *perverse* incentive to benefit without cost (to the user) is not only rational and all too human, but it overwhelms communities' incentives to cooperate. Cooperation, after all, involves high transaction costs, especially in trying to reach agreement on rules and enforcing compliance against powerful local elites who benefit most from this self-destructive system.

3. UNSUSTAINABLE SMALLHOLDER AGRICULTURE

So how do smallholders survive? Certainly, many households in the better agro-ecological regions of the country do well enough. But the majority living in the drier regions find themselves mired in a neo-Malthusian trap. Their survival depends primarily on the government and donors for both inputs and food. Before 2000, three-quarters of smallholder maize sales came from only 10 percent of households that were located in the better farming areas. Rohrbach and others worried that this "deflected attention from *the extensive and consistent reliance of a large proportion of smallholders on public food distribution programmes*."[11] [Emphasis added]

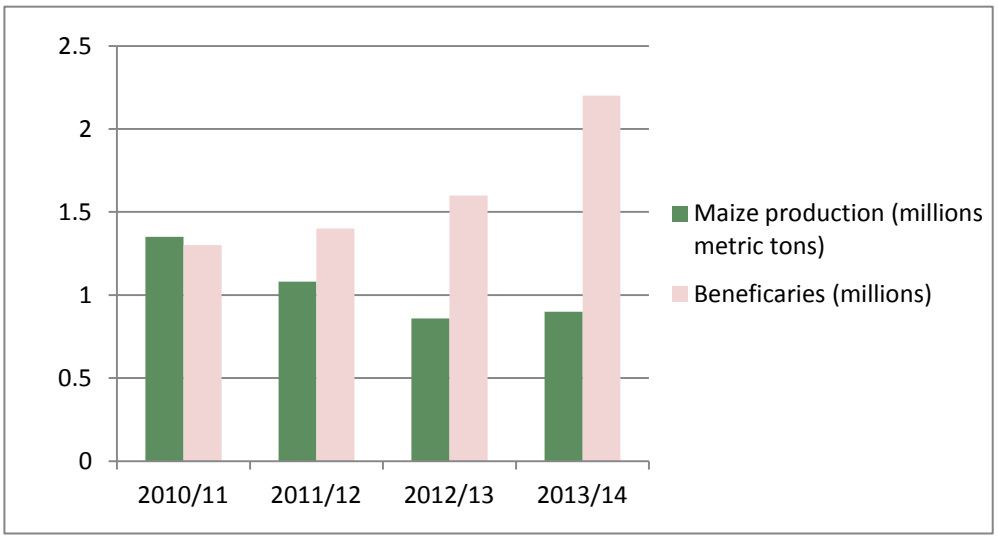
[10] Hardin G. (1968) The Tragedy of the Commons. *Science.* **162**:1244

[11] Rohrbach, D.D., J. Stack, B. Heddon-Dunkhorst and J. Govereh (1990) Agricultural Growth and National Food Security, Proceedings of the First National Consultative Workshop, Juliasdale, *Integrating Food, Nutrition and Agricultural Policy in Zimbabwe*, University of Zimbabwe: Harare. (p.106)

After 2000, when land invasions saw maize production plummet well below national requirements, donors stepped in and took over responsibility from the State to support and feed the rural population. Hundred of millions of dollars have since been poured into the UN's World Food Programme, the Food and Agricultural Organisation, and bilateral development programmes. When rainfall is erratic, as it was during 2002/03, one in every three Zimbabweans – 5.5 million people – needed food assistance.[12] Even when weather conditions improved, such as the 2009/10 season, 1.9 million Zimbabweans remained food insecure and 650,000 communal farmers were supported with agricultural inputs by the international community. The UN Office for the Co-ordination of Humanitarian Affairs (OCHA) noted that smallholders were "becoming increasingly dependent on emergency aid, losing self-reliance and the capacity to manage their own development in the future."[13]

Figure 2 shows that in the 2010/11 season Zimbabwe produced 1.35m tons of maize (blue column), the highest in a decade, but that 1.3 million people (orange column) still required food assistance. It shows that maize production has gradually declined since then, while those in need of food handouts have risen. In 2014, 2.2 million people will require assistance.[14]

Figure 2: Total maize output and number of people receiving handouts



[12] FAO/WFP Crop and Food Supply Assessment Mission to Zimbabwe, 19 June 2003.

[13] *The Zimbabwean*, "UN halves Zim Humanitarian Appeal", 30 November 2009.

[14] WFP News Release, "Hunger looms as Zimbabwe faces highest levels of food insecurity in years", 3 September2013

Rather than just handing out food, donors have developed more complex smallholder programmes. During 2008/09, about 350,000 households benefited from seed and fertiliser distribution, conservation agriculture, and training and extension. Even so, resources were sufficient to meet the needs of only 46% of the total number of households projected to be food insecure.[15] Based on these figures, over 750,000 rural households were food insecure.

One has to wonder what lessons were learnt from donors' impact evaluations. What did they reveal about the sustainability of smallholder agriculture, about poverty reduction strategies, and about future interventions? No amount of talk about poor but resilient households developing "coping strategies" can disguise a long-held truth. Hundreds of thousand of people are trapped in an agricultural system that is the author of their poverty.

Boserup made the crucial point that the *institutional* evolution of land rights must necessarily accompany *technical* intensification if we are to see agricultural growth. Yet donors have relied solely on a technical box of tools to sustain smallholder livelihoods. Unless support is also given to gradually transform a dysfunctional tenure system, poverty reduction and sustainable agricultural growth will prove elusive. But reform has been made all the more challenging because, rather than the evolution of land rights, Zimbabwe has experienced the opposite. Over 10 million hectares of resettlement areas, previously held under secure freehold title, have regressed into unregistered use rights only. Resettlement areas now fall under a customary land tenure regime in all but name. A new long-term and visionary approach is therefore needed for the 21st Century.

4. A LAND TENURE POLICY FRAMEWORK

Rethinking land tenure, in my view, should be founded on a simple set of principles to develop a policy and regulatory framework that would enable the necessary changes to be made to tenure rules based on sound institutional and economic theory. In particular, it should focus on creating an inclusive strategy to commercialise smallholder agriculture. Its aim should be to generate agricultural surpluses and sustainable growth within the sector. As a starting point, I would suggest the following principles:

Principle 1. *Recognise that property rights are humanly devised rules that have evolved over time.* These rules do not necessarily promote greater productivity, more equity, or ecologically sustainable outcomes. Indeed, it can sometimes produce perverse incentives that result, for example, in the "tragedy of the commons". The role of policy, therefore, is to modify the underlying rules to create positive incentives that result in desirable social, economic and environmental outcomes.

[15] *Personal Communication*: Jean Claude Urvoy, FAO representative, Zimbabwe, 22 April 2009

Principle 2. *Recognise that rules can also be informal and customary. Because they are rooted in culture, rules tend to change slowly.* Radical change is therefore neither desirable nor necessary. Nor is it necessary to conceive of land tenure in terms of strict alternatives, such as customary or freehold. Over time, customs can be formalised and new rights added to property rights regimes. The direction of change in property rights is more important than the pace of change.

Principle 3. *Land tenure rules should not be imposed, but adopted with the informed consent of the people*. Indeed, the policy, institutional and regulatory framework should include mechanisms whereby people may democratically choose to add rules and constraints to the way in which property rights are exercised within their communities to achieve local and national objectives.

Principle 4. *Property rights should evolve towards greater security of tenure.* Security of tenure is necessary to ensure social stability and the legitimate, peaceful enjoyment of property by all citizens. It is also the necessary condition to promote investment, productivity and economic growth. Sadly, insecurity pervades all agricultural land in Zimbabwe. Commercial farms with registered freehold title can be acquired by nothing more than the expedient of publishing a few details in the Government Gazette. Offer letters that reallocate farms can simply be cancelled by the Minister of Lands.[16] And 99-year leases – like permits issued to settlers on older schemes – grant virtually all the powers and rights to the State, but few to the settler. Over 100,000 new A1 farmers have been resettled with no documentation at all.

Principle 5. *The State must have the capacity to administer and enforce property rights.* This principle makes the notion of state leases hopelessly unrealistic. If the state has no capacity to survey and register the tens of thousands of properties it has allocated, what capacity does it have to administer them? The disjuncture between ambition and reality is typified by calls for "a tenure regime permissive of state policing of land usage" to ensure optimum utilisation of all resettled farms.[17]

Principle 6. *Property rights should create incentives that promote productivity and the sustainable use of natural resources.* I now turn to consider this principle.

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[16] UNDP (2002) *Zimbabwe: Land Reform and Resettlement: Assessment and Suggested Framework for the Future.* Interim Mission Report: New York.

[17] Zimbabwe (2003) *Report of the Presidential Land Review Committee,* Vol.1 (Main Report) Under the chairmanship of Dr. Charles Utete: Harare. (p.169)

5. COMMERCIALISING SMALLHOLDER AGRICULTURE

5.1 ARABLE LAND

So what are the pre-requisites for increased productivity and commercialisation? Commercialisation not only requires that factors of production – land, labour and capital – be combined efficiently, but also in sufficient quantities to provide a sustainable livelihood for small farmers.

Let us first consider the matter of efficiency. We learnt earlier that productive efficiency is optimised when factors of production are combined in such a way that output is maximised at least cost. Crucially, however, this condition is only met when the cost price of the factors of production reflect their scarcity value. Because communal land is allocated free of charge, it is unable to reflect this value *vis-à-vis* labour and capital. It therefore "impairs the signals and incentives that are necessary to guide and induce farmers to use farm land efficiently."[18]

So the question is how we can give land an economic scarcity value or price. The answer is, of course, through a land market. But this requires a tenure system which allows for the transferability of land. The rules must allow owners to rent or sell their property. But the market can only become operationally efficient once the properties have been clearly defined, both physically and legally. Creating a transparent and efficient land market therefore starts with the Rukuni Commission's recommendation for a system of land adjudication, demarcation and registration of communal smallholders' plots.[19] By taking the Commission's recommendation a step further it would be possible to develop the institutional and regulatory framework which supports a land market in the communal areas.

Let us now turn to the question of the *quantity* of factors of production that go into a commerical farming system. Clearly, rural livelihoods become more sustainable if smallholders could acquire more land. Under the current tenure system this is not permissible. But a land market would allow more productive farmers to purchase neighbouring plots and consolidate their own holdings into small farms that are more viable.

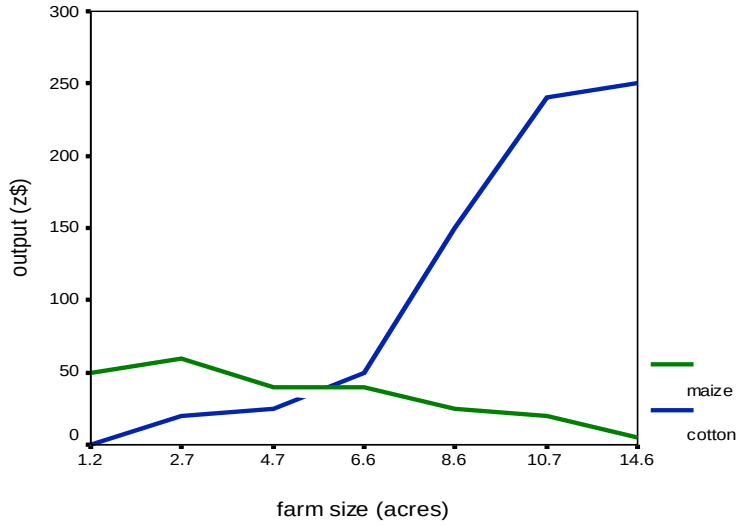
Figure 3 shows that when farms are very small, the household's priority is to meet its subsistence requirements by growing maize. But as farms get bigger (or are consolidated) – more land is available for cash crops, such as cotton. Commercialization begins to emerge as

[18] Schultz, T. (1964) *Transforming Traditional Agriculture*, Yale University Press: New Haven (p.125)

[19] Zimbabwe (1994) *Report of the Commission of Inquiry in to Appropriate Land Tenure Systems,* under the chairmanship of Prof. M. Rukuni. Government Printers: Harare. (p.51)

the area set aside for growing food tails off and household food security is based on the income from crop sales.

Figure 3 Household maize and cotton production by farm size



Source: Doré (1993)[20]

But something else happens. Vital capital is slowly drawn back into the farming system. With increased farm output and cash incomes, farmers are able to invest their surpluses in farm inputs that maintain soil fertility and boost yields. That is not all. The transferability of land unlocks its collateral value, allowing smallholders to independently access capital markets for farm loans. These need not be restricted to seasonal loans for yield-enhancing farm inputs, but also include longer term loans for irrigation and labour-saving equipment, triggering further rounds of increases in productivity, output, and ultimately, smallholders' incomes and standard of living. Sustainability, and then commercialisation, will gradually take hold.

There is one other major benefit. The government or donors – as the case may be – will gradually be able to reduce subsidies to communal households, releasing funds for desperately needed rural infrastructural projects that could play a key role in supporting the commercialisation of smallholder production.

5.2 EMPLOYMENT CREATION

[20] Doré, *ibid*., (p.181)

It would be quite legitimate to ask – given the excess population and the shortage of land – what happens to those who rent or sell their land. First of all, they would earn rent or be compensated for the value of their land, so they would not be worse off. The other expectation is that a good proportion would be employed on the larger and more viable consolidated holdings. So long as the marginal productivity of their labour, as reflected by the wage rate, is greater than earnings from tiny unviable parcels of land, labour would continue to be drawn into these larger, more efficient farms. This means that both the farmer and the labourer would be better off.

Opportunities for those who sell or rent their land are not, however, restricted to farm employment. Zimbabwe is their oyster. Traditionally, many breadwinners from the communal areas have sought and found employment in commerce and industries in Zimbabwe's towns and cities. This phenomenon of the transfer of labour from lower productivity agriculture to higher productivity jobs in urban areas – the structural transformation of an economy – is one of the most robust stylised facts of development. This will be the subject of my next and final paper in this series.

5.3 COMMON PROPERTY RESOURCES

Access to natural resources – especially grazing areas and woodland – is available free of charge to households. But it is *not* cost-free. It carries a cost of what economists term an "externality" because it imposes an involuntary cost on others. The more grazing land used by one household's cattle leaves less grazing land available to all others. It also imposes an environmental cost which is borne by other smallholders, the government and donors. Take, for example, the erosion caused by deforestation and overgrazing. Apart from the long term costs of the land's lower productivity, silted dams result in lost livestock and garden production. Costs are also incurred by either having to dredge the dam or build a new one.

Economists have long recognised that the solution lies in internalising the costs of these externalities. They tackle the problem by preventing the costs of environmental degradation by making new rules that create appropriate incentives. Some researchers believe it is possible to make new rules that convert open access to the commons into a "common property regime". In essence, this represents "private property for the group of co-owners (since all others are excluded from use and decision making)."[21] Bromley describes them as social units with definite membership and boundaries which hold customary ownership of certain natural resources, such as grazing land. The difficulty with this approach, as mentioned earlier, is the high transaction costs of enclosing the commons, organising cooperation, and enforcing compliance. Also, as Bromley points out, the internal pressure of population may be impossible to resolve: as is the case in the communal areas.

[21] Daniel Bromley (1991) *Environment and Economy:* Blackwell, Oxford. (p.25/6)

Nevertheless, the Rukuni Commission recommended that Land Registration Certificates be issued for common property regimes within villages that had been surveyed and that had formalised boundaries. "Villagers," its report added, "should develop their own system of allocating and controlling grazing rights for individual households."[22]

An alternative method is to borrow an idea from the European Commission's Emissions Trading System which is based on the principle of "cap-and-trade". In concept, permits are allocated to firms to emit carbon within a set limit (the cap). Those firms that reduce their emissions can then sell their permits to polluters (the trade). The same principle can be applied to grazing areas. It starts with a common property regime. But rather than relying on members' goodwill to cooperate based on a set of rules, grazing rights are traded. The first step is to estimate the carrying capacity of the grazing area: i.e. the total number of cattle that the grazing area can sustainably support. Each member of the community is then issued with grazing rights. Those with fewer cattle can sell their rights to those with more cattle. The affect is to compensate those who do not use the common grazing areas, and charge those who do. But would this be doable? Given the organisational complexity and residual inefficiencies of the system, it seems unlikely, though possible.

There is one way in which all externalities can easily and automatically be internalised: that is to subdivide the area into privately owned parcels of land. In fact, this has already been proposed by the Rukuni Commission for resettlement areas:

> For model A, which currently operates on communal grazing, the Commission recommends that the schemes be given the option to be replanned and *demarcated into individual*, *self contained farms* accommodating residential, arable and grazing land.[23] [Emphasis added]

In other words, rather than separating land into cultivated fields and common property areas, the farming area would simply be divided into small farms, as is most common in the rest of the world.

6. PROPERTY RIGHTS AS HUMAN RIGHTS

In this paper I have argued that the solutions to reducing poverty and commercialising smallholder agriculture lies, at least in part, in changing the rules governing property rights in communal and resettlement areas. For many, this may be unthinkable. But my question is this: why should one person living in a particular area of Zimbabwe have different rights to another person living in another area? Why should a person living in a "commercial" area have the advantage of certain property rights which are denied to a person living in a "communal" area? Should property rights, like human rights, be indivisible and equally

[22] Zimbabwe (1994), *ibid*., (p.51)

[23] Zimbabwe (1994), *ibid*., (p.70)

available to all, not just the rich and privileged few? Just as we should strive to ensure that citizens have the full panoply of human rights, so rules should evolve towards giving citizens full and equal rights to property.