



Global Drylands Initiative

FINAL DRAFT FOR GDI REVIEW

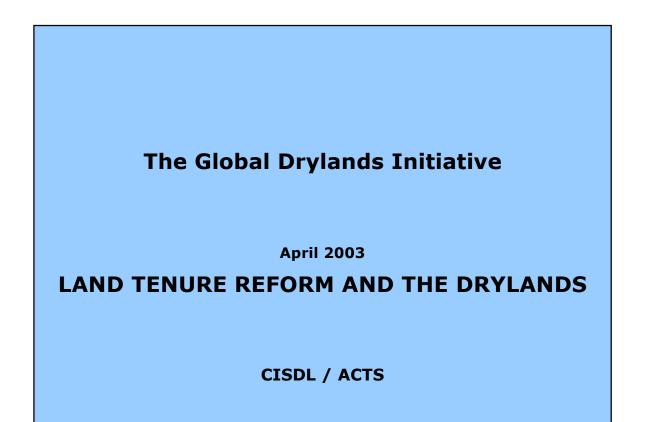


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i. Executive Summary

"Property rights serve human values. They are recognized to that end, and are limited by it." - Chief Justice Joseph Weintraub, Supreme Court of New Jersey, USA

Land is a critical productive asset on which many livelihoods depend, particularly in the developing world. For the poorest drylands populations, land degradation is a major factor that affects the ability to achieve food security and enhance livelihoods. Because drylands typically have low vegetation cover, they are particularly vulnerable to mismanagement which removes grasses, bushes and trees that protect the thin layer of fertile topsoil from the ravages of wind and waterborne erosion. Through poorly-managed intensification of land use, and deforestation, productive drylands can be degraded into unproductive land that cannot support agriculture, or sometimes not even pastoralism.

International attention to the related issues of land reform and land degradation occurs mainly in the context of the 1994 UN Convention to Combat Desertification. More recently, discussion of these issues has been re-invigorated following the recommendations of the world's governments at the 2002 World Summit for Sustainable Development in Johannesburg, South Africa.

The reversal of land degradation is vital for the livelihoods of poor peoples living in drylands, and also for the conservation of the world's biological resources. This task requires significant investments in human capital and resource management systems, including land reform efforts. The issue of land tenure, in particular, is highly relevant. Land tenure systems which impose unequal access to and control of resources for marginal populations can contribute to the degradation of dryland areas. And effective, secure access to land resources can provide an essential incentive for land users to invest in sustainable land use practices.

Challenges of land tenure reform in drylands: what can decision makers Do?

Land tenure systems are a legal construct – a bundle of rights designed and enforced by the societies which grant them. How can we properly characterize all these different yet vitally important rights? Which rights pertain to which land user, how can they be recognized, and how can they be made secure enough to catalyze crucial investments for the drylands?

Poverty, land degradation and desertification lead to loss of livelihoods, especially for vulnerable drylands dwellers. These are manifestations of deeper structural social and economic problems, including land pressure, lack of access to land, poorly-defined land tenure regimes, and poorly managed land reform efforts.

Challenge 1: How can we ensure that land tenure systems and land tenure reform processes are truly participatory, accessible, and transparent?

Decision-makers must commit to transparency and public participation in land tenure. The efforts must be coupled with strong commitments to accountability, transparency and public information-sharing. This helps to ensure sustainability of the effort, and reduces the possibility that laudable goals are subverted by other interests. Decision-makers can explore multi-stakeholder approaches to identifying and responding to land use and land reform challenges.

Challenge 2: What institutional structures can be established at local, national and international levels to support legal aspects of land tenure security and reform?

In many countries, dry areas were (until recently) seen as 'wastelands', of little economic interest to central authorities. For this reason land rights remain ambiguous in many drylands, often with multiple and overlapping legal regimes – usufruct (claim by use), customary, religious - sometimes contradicting each other and the legislation of the state, which can lead to conflict.

In many cases, especially in emerging and transforming economies, land markets may require some state intervention. By themselves, markets will not do much to transfer land to the poor. Careful redistribution of public lands, or state expenditure on land reclamation and subsequent allotment as private property can make assets available to those too disadvantaged to enter into normal land market transactions. Support is also needed for institutions to administer the necessary land acquisition and distribution mechanisms, and to advise prospective land owners.

In many developing countries, existing property rights with regard to land are ill-defined. When rights to resources are not well-defined, the poorest and most marginalized segments of society, especially women and children, suffer the most – exacerbating their daily struggle to meet basic needs. In such situations, more powerful members of society can use their access to information, political influence, and money to access land resources at the expense of the poor. In some countries, communities face the sporadic nationalization of land holding by the state, undermining the incentive to invest in the land. In fact, even where land tenure systems do function, they often have unequal effects on the society.

Simply providing title to land, however, does not in itself guard against this process. Even providing legal title to land users in a transparent manner, however, not only allows for the land to be used as collateral for loans, but also often leads to default to usurious lenders, leading to concentration of land ownership. The very act of deciding who owns land is frequently manipulated by powerful groups, with the result that the state ends up legitimizing and enforcing inequalities. Furthermore, providing title in the name of the 'head of the household', typically considered to be men, often leads to sale of land which may in fact have been worked by women. This situation is exacerbated in the case of polygamy. It is not surprising, therefore, that the pattern and process of land ownership and distribution in many countries is simply a reflection of deeply embedded power relations, and it may be naïve to believe that one can change this pattern without addressing the structural conditions which created it.

It is important to develop effective, accessible information systems which provide data on land use patterns, land values, availability of water, traditional land-users and title-holders. An accessible land registration system is also vital. In the best cases, this also involves public information efforts to encourage those with valid claims to come forward. Establishment of forums for public consultation and involvement in decision-making, and for peaceful dispute resolution, is also crucial.

Challenge 3: How can national processes address the overlaps and contradictions between formal and informal, customary and modern land tenure systems, and 'hybrid' systems?

A key is developing systems of land tenure which respect local and customary traditions. Harnessing community traditions of self-organization, has emerged as a key to successful land tenure reform. Policies can also explore creative approaches to the use of customary land systems, including in some instances their codification. It is important however that the communities coming under such

codified systems are highly involved in the process and are 'self-identifying', as issues of communal identity are often complex and contested.

Past failures to combat desertification have been linked to a lack of local resource-user involvement and to an absence of solutions compatible with indigenous cultures and land tenure systems. The rights in question can take myriad forms. They can be held by individuals, firms, organized groups and the state at all levels. Their precise nature often depends on context-specific statutes and by-laws, which may pose restrictions on land and resource-use. The creation of property rights in land is complicated by the co-existence of formal and customary legal systems. Often, traditional legal arrangements are unwritten, and therefore may be 'invisible' to external institutions. Many societies in developing countries have deeply embedded preferences for customary law approaches to questions of rights to access, use, inherit or transfer title over land. These laws can be fundamental expressions of culture and tradition, derived from a combination of spiritual beliefs, geography, economics and history. In these instances, urban, 'modern' biases must be adjusted to consider the views and needs of rural peoples, especially in developing countries.

Challenge 4: How can the rights of marginalized groups, including, women to control over land be promoted and protected?

Special emphasis is needed on developing ways to ensure that marginalized groups -- be they pastoralists, nomadic groups, poor dryland communities, or women -- are able to benefit from land distribution programs. Legal means – such as joint titles for married couples – could be accompanied by awareness-raising and civic education exercises.

Gender-sensitive technologies and natural resource management systems – addressing access to water, for example – also have great potential.

Challenge 5: How can land tenure systems and land tenure reform processes take a holistic, comprehensive and co-ordinated view of the institutional and physical environment?

Land issues can have international repercussions where resource degradation (e.g., land or water) or tensions arising from it spill into neighbouring countries. Regional approaches are useful, and developed countries and other donors can and must increase their commitment to provide technical support, skilled personnel and funds to local administrative units responsible for areas suffering land degradation.

Also, policies need to be set in place to protect and manage the natural resource base for economic and social development. Land reform efforts are particularly successful when built on the foundations of broader natural resource management and income-generation programmes to enhance sustainable livelihoods in vulnerable areas.

The issue of land-use-specific tenure also needs to be considered. Much of the theory and practice of land tenure is implicitly predicated on the assumption that land users use one piece of land, as in most temperate agricultural systems. In areas of rainfall too low to support crop production and lacking economically accessible groundwater, however, there is an ecological imperative for mobility; to follow the rains wherever they may fall. In the case of mobile land use, the key challenge in land tenure reform is to ensure that there are reciprocal agreements of access between land users. Land titling on the basis of title in the name of an individual in such a system would be inappropriate, as it would confer right of disposal, potentially taking a part of the resources out of the land use system. This is precisely what is happening in many areas which are marginal for agriculture - in particular where the state is investing in water development, often in uneconomic schemes and under pressure

from better connected groups – to the detriment of the traditional land users. Indeed, conflict between agriculturalists and pastoralists is another major challenge for land tenure reform in drylands

Further Thoughts

The key now is implementation. There might be the most progressive land tenure legislation on the books in a capital, but if it is not implemented at the local level it will not bring sustainable land use practices or equity.

As such, land tenure - and in particular land tenure reforms – are not only a legal issue but also one of governance. Security of tenure is most sincerely guaranteed by the political neutrality of the bodies which write and enforce legislation, and by the transparency of land reform processes. This illustrates the central importance of genuine broad-based participation in land reform processes. Facilitating these conditions is a great challenge: but a precondition for meaningful change.

Questions of access to, as well as ownership and distribution of land, are politically complex. Experience suggests that secure land tenure systems can help encourage productive investment, create incentives for conservation, improve livelihoods and stimulate economic development in both rural and urban areas of countries with large areas of drylands. On the other hand, there is also evidence that inappropriate land tenure systems - those which result in unequal access to and control of resources for marginal populations - are a major obstacle to poverty reduction. Efforts to implement land reforms often challenge vested interests and provoke social tension, while the failure to pursue land reform can spark conflict or even revolution. Failure to implement meaningful reforms, however, can contribute to the continued degradation of dryland areas¹, which in turn will create the social conditions under which it is difficult to carry out such reforms - a vicious circle.

To break this cycle, the formulation of land tenure systems must become a wiser and more strategic process, involving analysis of the dynamic nature of dryland livelihoods in the 21st century. The case studies below reveal a series of general lessons learned. Drylands have complex ecologies and can shift quickly from a productive to unproductive state - and vice versa. In many regions, drylands are occupied by the poorest of peoples, who depend on these lands for their livelihoods. The needs of poor dryland communities are often overlooked in policymaking, particularly when decision-making is concentrated in urban areas. There is now an urgent need to focus on the poorest of the poor, but draw lessons from all experiences.

This paper raises many questions and challenges. There are few simple or straightforward answers. Without new energy and strong commitment to change, the future is grim for the economies of many developing countries and the people of the drylands. The more serious challenge facing policy-makers, academics, nongovernmental organizations and members of dryland communities is to engage in a sustained, inclusive, and honest process of dialogue.

ii. Land Tenure Definitions

This section looks at some specific property terms and concepts relevant to land tenure reform, from a 'western' and also a 'customary' point of view.

<u>Property rights</u> are entitlements. They establish a relationship between the holder of property and a certain set of resources. The legitimizing norms and institutions of societies maintain this relationship over time, and defend it against trespass or other interference. In western or post-colonial countries, rights are usually divided into usus, fructus and abusus, the rights to use, enjoy the fruits of, and dispose of (or alienate, sell) property. By establishing these relations, property rights are intended to expand incentives for economic activity, providing a basis for investment. These rights can concern land (including soil and sub-soil resources), but also related (or non-related) rights over water and air, access to navigable waters, wildlife, genetic resources or intellectual creations.

<u>Land reform</u> is a general term referring to the redistribution of property rights over land and related resources (which can include water and other resources). Land reform is used as an instrument to promote more efficient and equitable distribution of land and landed resources. It is usually undertaken for the benefit of the landless, tenants and farm laborers.ⁱⁱ

<u>Land tenure reform</u> is a critical aspect of land reform and refers to changes in the way in which societies confer bundles of rights and obligations to land holders - that is, it focuses on the terms and conditions on which land is held, used, and transferred. Land tenure reform systems typically involve a combination of the following:

- Provision of social, political and economic support to make the institutions governing transactions of property rights operate with more efficiency, effectiveness and fairness.^{III}
- Verification and registration of land titles for those with a demonstrable claim to the land. By replacing doubt and contention with certainty, securing land title can encourage the title holder(s) to invest time and effort in the land and thus stimulate development.
- Development of effective, accessible information systems which provide data on land use patterns, land values, availability of water, traditional land-users and title-holders.
- An accessible land registration system. In the best cases, this also involves public information efforts to encourage those with valid claims to come forward.
- Establishment of forums for public consultation and involvement in decision-making, and for peaceful dispute resolution.

Customary systems are the *de facto* systems of land tenure in operation in many dryland zones, rather than statutory laws. In Africa, for example, most people hold their land under indigenous customary systems irrespective of the formal legal position.^{iv} Some significant aspects of customary land access in dryland areas are described below.

<u>Systems of multiple resource use</u> are particularly common in dryland areas. They include different categories of users (e.g. individuals, households, ethnic groups), users of different status (e.g. owners, secondary and tertiary users), different uses (e.g. hunting, collection of wild products, grazing), and different kinds of rights (e.g. seasonal access, rights of disposal, rights of occupancy).^V They are often very complex, and often allow for symbiotic relationships between agriculture and

pastoralism. A typical example of this is for herders to graze their animals on the stubble of harvested crops. In return for allowing livestock to eat the crop stubble, the farmer benefits from the animal dung which fertilizes the field. In Somalia's Shabeelle Valley during the 1950s and 1960s, even irrigated areas had land set aside for animals to graze and take water from the canals.^{vi} In order for such systems to work, herders require rights of seasonal access to fields, and the system must be adequately policed.

<u>Specific areas of resource abundance</u> are often key to livelihoods in the drylands and hence have special land tenure regimes. These include dry-season grazing areas and pastures reserved for times of drought, wooded areas and seasonal rivers. Such areas, which comprise just a fraction of the total arid land area of the world, form 'lifelines' for local communities, and are often managed under systems of multiple resource use.^{vii} Degradation of these areas, or their conversion into other uses, may have negative impacts on livelihoods across a wide area. The patchwork of key resource areas within the wider drylands landscape is often far more significant to dryland communities than modern notions of territory: in E. Africa for example, the dry mountain forests of Turkana-Moroto, on the Kenya-Uganda border, are crucial dry season grazing reserves, used by communities from both countries who cross the border frequently.

<u>Water</u> is a prime determinant of access to dryland areas; it is the key to dryland life and development. For example, if a borehole is privatized in an otherwise arid area, then a wide swathe of land around that borehole is effectively being privatized. Without access to the water, people, and livestock cannot use the land. Amongst most dryland peoples, ownership of water sources is usually vested in the local community (e.g. lineage group, or village) rather than the household. Water is traditionally rarely 'owned' exclusively even by these groups however: access by others is often allowed. Often a distinction is made between different water uses. Amongst the Sukuma of Tanzania for example, any water source, even those found on private land, were traditionally free for *domestic* use by anyone. However, as regards water for cattle, it was possible to charge people for use of a private wateringhole.^{viii} Pastoral societies have developed wide-ranging kinship networks that allow negotiated access to water. Political structures have been shaped by the distribution of this precious resource.

<u>Communal tenure</u> is a common feature of customary land tenure systems in the drylands, with overall authority for land use vested in the traditional leaders of the cultural group (typically older men). Carefully negotiated systems for common pool resource management provide a number of goods and services essential to livelihoods in the drylands. These include material items such as timber, water, and food; off-season opportunities such as production of local handicrafts; and wider social and economic gains including water recharge and biodiversity conservation. In traditional pastoral societies, livelihoods are based almost entirely on common pool resources. Even in areas where private land holdings are predominant, common resources are important: in some areas of India, for example, these provide up to 25% of total household income.^{ix} In agricultural areas, common pool resources are used predominantly by the poorer segment of society, providing a safety-net for those with minimal private land holdings.

1. Introduction

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Land is a critical productive asset on which many livelihoods depend, particularly in the developing world. For the poorest drylands populations, land degradation is a major factor that affects the ability to achieve food security and enhance livelihoods. Because drylands typically have low vegetation cover, they are particularly vulnerable to mismanagement which removes grasses, bushes and trees that protect the thin layer of fertile topsoil from the ravages of wind and waterborne erosion. Through poorly-managed intensification of land use, and deforestation, productive drylands can be degraded into unproductive land that cannot support agriculture, or sometimes not even pastoralism.

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The reversal of land degradation is vital for the livelihoods of poor peoples living in drylands, and also for the conservation of the world's biological resources. This task requires significant investments in human capital and resource management systems, including land reform efforts. The issue of land tenure, in particular, is highly relevant. Land tenure systems which impose unequal access to and control of resources for marginal populations can contribute to the degradation of dryland areas. And effective, secure access to land resources can provide an essential incentive for land users to invest in sustainable land use practices.

Challenges of land tenure reform in drylands

Land tenure systems are a legal construct – a bundle of rights designed and enforced by the societies which grant them. How can we properly characterize all these different yet vitally important rights? Which rights pertain to which land user, how can they be recognized, and how can they be made secure enough to catalyze crucial investments for the drylands?

The rights in question can take myriad forms. They can be held by individuals, firms, organized groups and the state at all levels. Their precise nature often depends on context-specific statutes and by-laws, which may pose restrictions on land and resource-use. In many countries, dry areas were (until recently) seen as 'wastelands', of little economic interest to central authorities. For this reason land rights remain ambiguous in many drylands, often with multiple and overlapping legal regimes – usufruct (claim by use), customary, religious - sometimes contradicting each other and the legislation of the state, which can lead to conflict.

The creation of property rights in land is also often complicated by the co-existence of formal and customary legal systems. Often, traditional legal arrangements are unwritten, and therefore may be 'invisible' to external institutions. Many societies in developing countries have deeply embedded preferences for customary law approaches to questions of rights to access, use, inherit or transfer title over land. These laws can be fundamental expressions of culture and tradition, derived from a combination of spiritual beliefs, geography, economics and history. In these instances, urban, 'modern' biases must be adjusted to consider the views and needs of rural peoples, especially in developing countries.

In many developing countries in particular, property rights with regard to land are ill-defined. When rights to resources are not well-defined, the poorest and most marginalized segments of society, especially women and children, suffer the most – exacerbating their daily struggle to meet basic needs. In such situations, more powerful members of society can use their access to information, political influence, and money to access land resources at the expense of the poor. In some countries, communities face the sporadic nationalization of land holding by the state, undermining the incentive to invest in the land. In fact, even where land tenure systems do function, they often have unequal effects on the society.

Simply providing title to land, however, does not in itself guard against this process. The very act of deciding who owns land is frequently manipulated by powerful groups, with the result that the state ends up legitimizing and enforcing inequalities. It is not surprising, therefore, that the pattern and process of land ownership and distribution in many countries is simply a reflection of deeply embedded power relations, and it may be naïve to believe that one can change this pattern without addressing the structural conditions which created it.

Even providing legal title to land users in a transparent manner, however, not only allows for the land to be used as collateral for loans, but also often leads to default to usurious lenders, leading to concentration of land ownership. Furthermore, providing title in the name of the 'head of the household', typically considered to be men, often leads to sale of land which may in fact have been worked by women. This situation is exacerbated in the case of polygamy.

The issue of land-use-specific tenure also needs to be considered. Much of the theory and practice of land tenure is implicitly predicated on the assumption that land users use one piece of land, as in most temperate agricultural systems. In areas of rainfall too low to support crop production and lacking economically accessible groundwater, however, there is an ecological imperative for mobility; to follow the rains wherever they may fall. In the case of mobile land use, the key challenge in land tenure reform is to ensure that there are reciprocal agreements of access between land users. Land titling on the basis of title in the name of an individual in such a system would be inappropriate, as it would confer right of disposal, potentially taking a part of the resources out of the land use system. This is precisely what is happening in many areas which are marginal for agriculture - in particular where the state is investing in water development, often in uneconomic schemes and under pressure from better connected groups – to the detriment of the traditional land users. Indeed, conflict between agriculturalists and pastoralists is another major challenge for land tenure reform in drylands.

Furthermore, there might be the most progressive land tenure legislation on the books in a capital, but if it is not implemented at the local level it will not bring sustainable land use practices or equity. As such, land tenure - and in particular land tenure reforms – are not only a legal issue but also one of governance. Security of tenure, therefore, is guaranteed more by the political neutrality of the bodies which write and enforce legislation and the transparency of land reform processes - a function of a balance of power, hence the central importance of genuine broad-based participation in land reform processes. Facilitating these conditions is a great challenge: but are a precondition for meaningful change.

As should be apparent from the issues raised, the questions of access to, as well as ownership and distribution of land, are politically complex. Experience suggests that secure land tenure systems can help encourage productive investment, create incentives for conservation, improve livelihoods and stimulate economic development in both rural and urban areas of countries with large areas of drylands. On the other hand, there is also evidence that inappropriate land tenure systems - those which result in unequal access to and control of resources for marginal populations - are a major

obstacle to poverty reduction. Efforts to implement land reforms often challenge vested interests and provoke social tension, while the failure to pursue land reform can spark conflict or even revolution. Failure to implement meaningful reforms, however, can contribute to the continued degradation of dryland areas^x, which in turn will create the social conditions under which it is difficult to carry out such reforms - a vicious circle.

The Challenges

Amongst the many important issues, a number of key challenges for policy-makers can be identified:

Challenge 1: How can we ensure that land tenure systems and land tenure reform processes are truly participatory, accessible, and transparent?

Challenge 2: What institutional structures can be established at local, national and international levels to support legal aspects of land tenure security and reform?

Challenge 3: How can national processes address the overlaps and contradictions between formal and informal, customary and modern land tenure systems, and 'hybrid' systems?

Challenge 4: How can rights to control over land of marginalized groups, including women, be promoted and protected?

Challenge 5: How can land tenure systems and land tenure reform processes take a holistic, comprehensive and co-ordinated view of the institutional and physical environment?

Structure of paper

This paper has started out with a brief introduction to land tenure, its complexities and challenges, the relationship to degradation in the drylands, and the international context. In **Part 2**, we look at land tenure reform. Definitions were provided in an earlier addendum, but how is it seen and why is it undertaken? The issues raised can challenge the international community to live up to their commitments, especially as outlined in the UNCCD and other international legal instruments. Then, in **Part 3**, we provide a comparative overview, a survey, of land tenure systems in the drylands. In **Part 4**, we turn to the challenges and trends in land tenure reform projects. What has worked well in the drylands, and where have problems emerged? We outline land tenure reform, poverty and environment linkages and how they affect livelihoods in the drylands. To do this, we use on a collection of case studies from Central and Southern Asia, Central America and the Horn of Africa to illustrate current practices and legal frameworks used to achieve sustainable development goals and reduce poverty in different countries. In **Part 5**, we summarize the main opportunities and challenges in developing land reform policies in the context of combating desertification and drought, and in **Part 6**, offer ideas for Decision-Makers. The paper will focus on the need to rethink conventional wisdom on land tenure approaches and ask - how can we best respond to these challenges?

2. What is Land Tenure Reform (and Why is it Important for Sustainable Development in the Drylands)?

The nature of tenure security has long been the subject of debate, especially as regards the drylands, where underlying ownership is dynamic and often disputed. It is also important to understand western notions of property rights because these continue to dominate both theory and practice of land tenure reform.

Tenure security and livelihoods can be seen from four points of view which influence tenure policy and land reforms in developing countries.^{xi} One focuses on 'property rights', underscoring the value of tradable titles to an economy, where tradable assets provide the key to credit and incentives to various kinds of investment in land. A second draws attention to 'agrarian structure' and inequities of property ownership. A third, 'common property' advocates, argues for the recognition and support of traditional, community-based property systems, many of which are still operative in the world's drylands. From this view, the commons is a source of non-tradable livelihoods for the poor. Fourth, 'institutionalists' focus on how the larger political economy is constantly reshaping property regimes, providing or denying tenure security to those people claiming a particular property right.

Another major influence, especially during the 1970's and 1980s, is the "Tragedy of the Commons" paradigm.^{xii} According to this argument, pastoralists raising their herds in "a pasture open to all" will seek to maximize their gain, by increasing the number of animals they own. This eventually results in land degradation: but for each individual herder, the direct benefits of the extra animals outweigh the indirect costs imposed by degradation – which is borne by the community as a whole. The fact is, however, that very few pastures are "open to all". Customary regulations have emerged in most places to ensure that communities know where, when, and how they can graze or cultivate. These systems may not be perfect, but they do provide some form of environmental management. Problems emerge when such systems are undermined by processes of conflict, modernization, and competing forms of governance. In such cases, regulations may not be enforced, meaning that the 'tragedy of the commons' idea becomes, at least partially, a reality.

Land tenure reform refers to changes in the way in which societies confer bundles of property rights and obligations to land holders - that is, it focuses on the terms and conditions on which land is held, used, and transferred. Clear land reform legislation will include provisions that clarify contradictions between potentially overlapping institutions. These laws should establish the purposes of the land reform; set forth the legal grounds for rights to land; create unambiguous, stable, property rights in land); and set a framework for the distribution of these rights to new holders.

The need for effective land tenure reform is well recognized in international sustainable development law, including the 1994 *Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification* (UNCCD) and several international human rights instruments. It has also been given recent attention by World Leaders in the WSSD Declaration and its Johannesburg Plan of Implementation.

The 1994 UNCCD obliges state parties to take measures to control and prevent the spread of desertification in their territories or to transfer technical support and funds to states that suffer from desertification. The UNCCD recognizes that desertification problems are often manifestations of structural social and economic problems, including poverty and lack of access to land, and poorly defined or inequitable land tenure regimes. It also recognizes that past failures to combat desertification have been linked to a lack of local resource-user involvement and to incompatibility with indigenous cultures and land tenure systems. UNCCD represents a domestic obligation for

countries to improve these laws in the future and to ensure that they do not further contribute to further degradation.

Box 1: The Declaration of the 2002 WSSD

States committed to: "[p]rovide access to agricultural resources for people living in poverty, especially women and indigenous communities, and promote, as appropriate, land tenure arrangements that recognize and protect indigenous and common property resource management." ^{xiii}

To help protect and manage the natural resource base of economic and social development, states also committed to: "[a]dopt policies and implement laws that guarantee well defined and enforceable land and water use rights and promote legal security of tenure, recognizing the existence of different national laws and/or systems of land access and tenure, and provide technical and financial assistance to developing countries as well as countries with economies in transition that are undertaking land tenure reform in order to enhance sustainable livelihoods." ^{xiv}

And finally, for sustainable development for Africa, states committed to:"[p]romote and support efforts and initiatives to secure equitable access to land tenure and clarify resource rights and responsibilities, through land and tenure reform processes that respect the rule of law and are enshrined in national law, and provide access to credit for all, especially women, and that enable economic and social empowerment and poverty eradication as well as efficient and ecologically sound utilization of land and that enable women producers to become decision makers and owners in the sector, including the right to inherit land."^{XV}

Several other international 'soft law' instruments are relevant. Global plans of action developed at the United Nations Conference on Human Settlements in 1996 recognized land reform as essential to achieving sustainable development.^{xvi} In addition, most major international and regional human rights instruments guarantee a right to property or peaceful enjoyment of possessions.^{xvii} These rights, often already exist in international and domestic legislation but lack effective implementation or monitoring systems. Nowhere is this more evident than in the continuing effort to put the legal rights available to rural women with regard to landed property into practice. Land distribution programmes still often assume the recipient will be a male without proper investigation of equity and economic rights of women. Due to its complexity, a 'rights-based approach to land tenure reform' is still elusive in practice. But in many regions, calls for the realization of a range of land-related human rights, such as the right to free movement, to information, to the means to have an adequate diet and to a sustainable environment, are becoming stronger and better recognized.

International *recognition* of the importance of land tenure, clear resource rights, and land reform is not, however, sufficient for effective land tenure reform. As demonstrated by the 2002 WSSD Declaration, it is now widely understood that the unequal distribution of land and weak tenure systems both contribute to poverty in many rural areas, especially in developing countries. Even with international assistance, many developing countries lack the institutional structures, legal capacity and information systems needed to carry out sustained reforms. The principles that shape these policies seem logical and easy to implement on paper. In reality, land tenure reform is a formidable, multidimensional task.

In developing countries and economies in transition, land tenure reform can take several forms: redistribution of land to the landless, securing tenure rights for landless individuals, or restoring rights in lands that were forcibly taken during colonial rule or state control.

Box 2: Arguments for pro-poor land reform and secure property rights.^{xviii}

1. Land reform can increase economic and agricultural productivity, as better compensation for effort motivates people.

2. Individuals and groups with little or no security of tenure have greater incentives to make the long-term investments necessary for sustaining and increasing agricultural productivity.

3. Land reform addresses social equity and maintains or restores political stability by improving the status and dignity of landless populations.

4. Land tenure reform can create the conditions for improved environmental and resource management. For example, by guaranteeing rights to land over generations, people are encouraged to cooperate and avoid conserve its resources, as they are more likely to derive the future benefits.

However, many land tenure reform efforts are hindered by factors such as inadequate funding, weak infrastructure, lack of integration with other policy priorities (such as land-use planning), resistance by incumbent elites, corruption, and political struggle. These can affect the success of such programs. The costs of establishing an appropriate legal and physical infrastructure, including a registry system, are often high. Social realities also complicate legal arrangements especially in developing countries and countries with economies in transition. For example, terrace sharecropping, carried out by tenants in traditional relationships that transcend generations, challenges new legal systems. Similarly, the use of grasslands by migratory peoples in many countries for forage or seasonal transversal - not settlement - sits uncomfortably with legal concepts of "possession" of land. In addition, even if people can secure rights to land, their ability to use it may depend on access to scarce water resources.

Before examining case studies of land reform from different countries, it is important to look at some characteristics of land tenure on the drylands and to identify some of the points that make the drylands unique social and ecological environments.

3. Land Tenure in the Drylands

The drylands of the world are challenging environments. Constraints posed by low levels of average rainfall in these zones, are exacerbated by the variable nature of that rainfall. Long droughts may be followed by destructive flash-floods. It becomes difficult to plan for optimal land holdings, seed, fertilizer and labour inputs because rainfall is so uncertain. In response to these environmental realities, dryland communities have tended to use three key livelihood strategies: flexibility (e.g. adjusting the location and amount of land cultivated or grazed according to rainfall), adaptability (e.g. switching crops or income-generating activities as necessary), and diversity (increasing the number of livelihood options available, both 'on-farm' and off).^{xix} Some specific examples of livelihood tactics are provided in Box 3 below.

Box 3 Strategies employed at the local level to cope with the variable character of dryland environments $^{\rm xx}$

Strategies employed by **farmers** include:

- Labour invested in soil-and-water conservation systems.
- Production of crops in a cross-section of ecological zones in order to spread risk and benefit from the differences in micro-environments.
- Opportunistic responses to climatic variability, such as the planting of crops in river flood-plains (flood-recession agriculture).

Some of the adaptive strategies used by **pastoralists** include:

- Keeping a number of small livestock herds, distributed over a wide area of the environment (herd splitting)
- Diversifying herd composition
- Use of kinship networks to redistribute livestock and thus spread the risk and benefits more evenly

There are many other strategies used by both agriculturalists and pastoralists, including:

- Gathering wild foods
- Diversifying into alternative productive strategies, such as wage labour, trade in honey, charcoal burning, or the selling of medicinal products
- Adapting and re-interpreting ethnic or group identities and alliances to improve access to natural resources

Customary systems are the *de facto* systems of land tenure in operation in many dryland zones, rather than statutory laws. In Africa, for example, most people hold their land under indigenous customary systems irrespective of the formal legal position.^{xxi} As described above in the Definitions, these are characterized by systems of multiple resource use, which are complex but particularly common in dryland areas. Specific areas of resource abundance, including dry-season grazing areas and pastures reserved for times of drought, wooded areas and seasonal rivers are often key to livelihoods in the drylands and hence have special land tenure regimes, forming 'lifelines' for local communities, and are often managed under systems of multiple resource use.^{xxii} Water is a prime determinant of access to dryland areas; and ownership of water sources is usually vested in the local community (e.g. lineage group, or village) rather than the household. Finally, communal tenure is a common feature of customary land tenure systems in the drylands, with overall authority for land use vested in the traditional leaders of the cultural group (typically older men). In agricultural areas, common pool resources are used predominantly by the poorer segment of society, providing a safety-net for those with minimal private land holdings.

Pastoral land tenure systems utilize concepts radically different from those generally employed by 'modern', 'western' systems. Resource rights are generally identified by group membership - such as clan or tribe – rather than by geographical boundary. Many pastoral groups have 'home areas' but also have dry season territories (which may be far away) as well as 'buffer zones' which border competing groups. Terms of access to these 'buffer zones' may be kept deliberately flexible, to allow creative use of such areas to mitigate against potential conflicts. Boundaries, therefore, do not function ways understood by modern legal systems.^{xxiii} The 'territories' utilized by pastoral communities tend to change in size and shape over seasons and years, depending on climatological variation and negotiations between competing communities.

But things are changing. Common resource areas are indirectly threatened by the commercialization of production and trade, urban links, and political systems attempting to replace or undermine the traditional leaders. In some cases, customary leaders have sold land rights as individuals, and the

whole community has become landless in the eyes of the law. In other cases, the regulations for use of communal areas break down due to a combination of factors. Frequently, powerful actors manage to gain influence in weakened management institutions, and modify access regulations to suit their interests. Women and youth, in particular, tend to have little say in such issues.

In many countries, land tenure has been vested formally in the state, and local populations have been assigned non-transferable user rights (or largely ignored by the legal regime). This was the case across much of the Sahel, where the 'tragedy of the commons' argument was used to justify state control. In practice, active state control over drylands is frequently limited to specific, resource-rich areas, such as forests (e.g. for timber, or as conservation areas), or rivers (e.g. irrigation, hydropower). Similarly, private interests tend to be limited to such key resource areas.

In practice, land tenure is pluralistic, and customary and modern systems can be permeable, influencing each other and borrowing from each other in innovative ways. Often, individuals will try to enforce their property rights by switching from one system to another as it suits them, or even using both simultaneously.

4. Case Studies of Land Tenure Reforms

According to the FAO and other agencies, land reform is back on the agenda because rural populations, including drylands dwellers, have put it there.^{xxiv} These peoples maintained their demand for access to land and other resources, especially in situations of under-utilized ('idle') lands and grossly unequal land holdings. While the protests of the rural poor have never ceased, today there are several trends that give added weight to their demands.

Awareness plays a key role. Globalization means that rural populations are participating in the stream of world information and development debates in ways that were impossible a decade ago. The Internet allow some rural populations and their civil society partners to inform the world of land reform issues. From the invasions of land seekers in Malawi and Zimbabwe and by the *Movimento Sem Terra* in Brazil, the continuing demand for restitution of property taken by previous regimes in South Africa to the transformation of economies and land use systems in the former Soviet Union and Aral Sea Basin, these new levels of publicity and awareness bring new dimensions to land reform.

In particular, global or cross-border coalitions are forming to address common challenges. For example, there is a new recognition by the women's movement and development practitioners alike, that rural women make up the bulk of agricultural producers but are the last to be included in land reform and rural asset distribution programmes.^{XXV} International working groups are now forming to address these issues, building the capacity of women to organize and participate.

Also, many countries have undergone radical political transformations during the last decade or so, including former USSR states as well as many single-party states in Africa, which have liberalized their political – and economic- environments. Land reform is often one of a package of fundamental processes which are designed to improve equity and economic productivity in such countries.

Within land tenure reform processes, dryland areas face particular challenges. In some countries, increased population and multiplying land uses (partly due to industrialisation) in high-potential areas are causing dryland areas to become more important for production. In others, pro-poor policies

highlight the difficulties of remote dryland communities, located far from markets and without significant representation at government levels.

Land tenure systems are designed and overseen primarily at the national level, and this is where land tenure reform takes place. As such, the following case studies have focused mainly on national attempts to reform land tenure systems. Many attempts could be highlighted, but this challenge paper covers experiences in different regions of the world, including the former USSR, Central Asia, Southern Asia, Central America, and the Horn of Africa.

4.1 Modern legal systems are struggling to understand and support evolving customary land tenure regimes

- In some dryland areas, customary systems provide flexible, well-adapted solutions to local land tenure needs. However, due to population increase, expansion and commercialisation of agriculture, and other 'modernisation' processes, customary land tenure systems are coming under increasing stress.
- In West Africa, customary systems have often been respected by government. However, official attempts to mediate conflicts over access to land from a Western legal viewpoint, use terminology and structures that do not reflect the nuances of customary land tenure systems.
- Policy-makers often discuss land tenure in terms of 'customary' or 'modern'. In fact, an evolutionary process is underway, through which some communal lands are being 'individualised' but in locally-specific ways, which differ from typical understandings of privatisation and modernisation.

In areas such as the savannah zones of West Africa, customary land tenure systems are particularly strong. These customary systems dynamically adapt to changing social and economic circumstances. For example, as arable land becomes more scarce, informal land markets are emerging, even though this is against 'tradition'. Pastoralists are increasingly moving into agricultural zones, and developing economic relationships with cattle-keeping farmers, which can be mutually beneficial but also, at times, conflictual.

Attempts by the state to mediate land disputes have encountered difficulties due to the complexities of customary systems. Customary systems are usually unwritten, have flexible geographical boundaries, and change depending on power-relations within the community. Often, legal and academic authorities over-simplify and generalise the customary rules of some groups onto others. Attempts to register land titles are likely to be problematic, as land titling may not take secondary user rights (e.g. to access tree products, or water sources) into account, privileging the rights of some over others.

In one area, customary 'land chiefs' are entrusted with the management of vacant land. Newcomers can apply to the land chiefs, and offer 'gifts' to use such land each year. There is often competition between the different land chiefs to attract livestock keepers to their areas, in order to gain cattle as 'gifts'. Recently, the state has forbidden access to land by pastoralists who are not citizens, and attempted to expel them. Conflict has erupted, and the policy has sparked division between leaders who benefit from the herders and those who do not. State policies are seen by some as a way for central authorities to eventually take responsibility for land away from customary leaders.

Conclusions:

- Customary tenure systems are subject to change due to social and economic pressures. As such they can be controlled by powerful actors at the expense of more marginal people, and can become contested. Participatory research is necessary to understand how local systems can be enhanced by laws and policies in order to protect marginalised groups, such as widows.
- Land titling, often seen as a solution to tenure insecurity, is not necessarily appropriate in dryland areas where communities enjoy multiple overlapping user-rights to a variety of resources. However, some aspects of the titling process such as historical research and mapping of land uses, could improve land tenure security in dryland areas if local people are given access to this information.
- Because customary land rights systems are so complex and numerous, it is impossible to legislate for all. A more realistic approach is to provide a legal framework to validate local agreements. Such a framework would make local systems enforceable if they adhered to agreed procedures, such as witnessing of agreements, or written formalisation of agreements in a local *lingua franca*.

4.2 Landscape-sensitive approaches are a necessity for effective land tenure reforms.

- Many pastoral and agro-pastoral societies have been largely misunderstood, ignored and increasingly marginalised from mainstream development efforts. Development efforts are generally piecemeal and focus on the project level, rather than taking a landscape-level approach. There is lack of coordination and awareness of the 'big picture' including cross-border movements in the sustainable management of drylands.
- Lack of detailed information by policy makers on pastoral livelihoods and its links to landscapes, coupled with institutions imposed on these communities, has created a costly information gap resulting in policy mismatches between the local level, national level and neighboring countries that share the same landscape.
- The pastoralists' almost total relience on the common resource pool makes them vulnerable to unfair land tenure arrangements. This is compounded by the fact that their experiences with the administration over the years have created an element of mistrust.

African pastoralists have for a long time been deemed as having land tenure systems structurally incapable of efficient land use. The notion that pastoralism is a primitive form of production has ensured that subsequent land tenure arrangements have not been sensitive to the realities of African ecosystems. The resultant land tenure reforms, with their focus on private land ownership agreements, have dispossessed many pastoralists of their traditional access to range land. In the process communities have become more vulnerable to drought and famine.

Historically, pastoralists had varying rights to resources within the commons. In most cases herders recognize private ownership of specific key resources (e.g. leaf-fall, firewood, and fruits). Among most pastoral groups, an assembly of initiated male leaders handles land administration and dispute resolution. Colonial and post-colonial changes in administration have resulted in differing policy directions at varying periods of time such as privatization, African socialism, and land adjudication/consolidation. However, this 'confusion' has alienated communities from the state. This has been exacerbated by policies that tend to favor one community against the other resulting in conflict, which often crosses international borders.

Conclusions:

- The development of land tenure arrangements that take the whole landscape into consideration irrespective of cross border administration regimes should be enhanced. This could be done through participatory and inclusive processes from the site levels to the regional level.
- There is need at the regional level to broaden areas of cooperation to include land tenure reforms because of the political, social, and economic linkages. This could be effected through memoranda of understanding and protocols.

4.3 Fertile mountain terraces can become drylands if they are not managed for food security and flood control^{xxvi}

- In some areas, such as the Near East, highlands cultivation uses traditional terraces which help anchor soil to the mountainsides and store rainfall runoff. However, traditionally maintained terraces can fall into disrepair or become abandoned for a variety of reasons, including the increasing importance of off-farm income; the lack of clearly defined responsibility between landowners and tenants; and the lack of money to invest in terrace maintenance.
- Less terrace maintenance can cause increased runoff thereby eroding the slopes and causing destructive floods in the *wadi* (ephemeral stream) beds, turning the slopes into veritable drylands.
- The lack of adequate decision-support tools and opportunities for participation, which can enable policy makers to understand farmers' investment behavior and lead to more acceptable, relevant policies, can inhibit the reversal of terrace degradation and restoration, affecting food security and povery alleviation.

In many highland areas of the Near East, such as highland Yemen or Syria, land is cultivated by owner families in the terraces, but sharecropping is also significant on over a third of the land. Terraces cultivated by landowners are often better maintained and more productive, demonstrating better maintenance than sharecropping tenants. While the responsibilities for maintenance, repair and other costs are defined in the customary rules of land use in the area, uneven distribution of power (often favouring landlords to the detriment of the cropper) has led to 'silent resistance', where the properties are not well maintained. More clearly defined responsibilities, through clear and enforced local agreements to cover maintenance and other costs, would help to address this issue.

When the land tenure systems are better defined, incentives exist for farmer investment in appropriate technologies. For example, gabion and rock construction techniques for erosion prevention in *wadi* beds have been introduced to farmers in several locations, providing bank protection. These can withstand flash floods: once there is security against flooding, crop improvement investments are more likely. Also, degraded livestock range can be improved. Once land terrace management is enhanced and productivity increases, investments can take place in improved veterinary services and extension services, in order to reduce losses and improve livestock health. Water harvesting techniques for domestic purposes can also be introduced in Yafa'a to reduce the burden on women who regularly travel long distances to gather water.

Conclusions:

- Proper enforcement of customary land use rules, which define maintenance and cost-sharing responsibilities, could significantly increase the investment in land improvement and terrace maintenance.
- Farmers are often seeking options for more profitable use of their terraces. Further on-farm participatory research is needed, to identify appropriate technologies, such as fruit trees and improved water harvesting (including micro-dams for supplemental irrigation). Causes of low productivity should be analyzed and the information made available to farmers and policy makers, as these can be actively engaged.
- Research and sharing of gender-appropriate technologies and water management approaches could also help local farm families cope with the changing socio-economic environment.

4.4 Challenges of Market-Based Reform in Countries with Economies in Transition¹

- In many countries with economies in transition, market-based land reform has been recently initiated, founded on the theory that markets can arbitrate supply and demand of land. A market-led land reform requires willing sellers and buyers. It is not clear that liberalisation always brings investors. Can market forces ensure those most motivated and best suited to be farmers get land, while inefficient land holders and absentee land owners are phased out?
- Many believe that the new land markets still require some state intervention. By themselves, markets will not do much to transfer land to the poor. If the former owner must be compensated at near market value by the purchaser, a poor farmer cannot repay out of farm profits alone. Even when land changes hands, land is often sold back former owners if markets are unregulated.
- Careful re-distribution of public lands, or state expenditure on land reclamation and subsequent allotment as private property can make assets available to those too disadvantaged to enter into normal land market transactions. Support is also needed for institutions to administer the necessary land acquisition and distribution mechanisms, and to advise prospective land owners.

The Aral Sea, bordered by Uzbekistan and other states, was once one of the largest freshwater lakes in the world. But the appropriation of the area for Soviet central planning has degraded the sea and

surrounding areas, with resulting land degradation. The Aral Sea Basin Capacity Development Project sought to restore the land as well as establish new land tenure systems.

Pre-Soviet tenure was varied, based on local traditional and Islamic law. This land was appropriated as Soviet *Sovkhoses* (state) or *Kolkhozes* (coop) property in the 1930s. As a result of the development of irrigated cotton monoculture, accompanied by the deterioration of land quality, the increase of water consumption for irrigation and a number of arid years, the flow of water into the sea in the 1980s practically ceased. The shoreline has retreated a distance of 60-80 km, exposing 33,000 square km of seabed. Salt-laden sand dust destroys up to 15,000 hectares of pastureland every year in the sea zone, and soil productivity has plummeted. The result is the deterioration of the population's health in the crisis zone: infant mortality; lung disease; cancers; tuberculosis; and typhoid. Salt and dust storms have raised the level of particulate matter in the atmosphere by over 5 percent, seriously affecting the Earth's climate.

The post-Soviet Constitution for the area neither establishes nor prohibits property rights. Some auctioning of Aral sea basin has been attempted, though many of these auctions failed, except for those covered by reforestation projects. Most fertile land rights are now held by *Kolhozes* called *"Shirkat"* farms (village + crops). Some agricultural pseudo-privatization has taken place, through conversion to non-transferable leases of 49 years or less. Farmer selection for this program of conversion is based on "demonstrated managerial and farming skills." Some farm houses and gardens are also now held under private land use right as *"Dekham"* farms. A non-commercial bank was formed to facilitate redevelopment and crop conversion, but a lack of real liquidity of collateral inhibits access to capital. In response, a new collateral system is being formed based on transfer of buildings and use rights. The value of these land use rights are to be established by "committee of experts."

Conclusions:

- Keep a Realistic Timeline? There has been a very slow conversion from monoculture; partly due to expectations of quick profits from foreign investment, which appears to have hampered long-term investments.
- Real Estate is More than the Houses? The dual legal status of the lots vis-à-vis their infrastructure is difficult to manage. Clarifications of the legal status of both aspects of the 'bundle of rights', and perhaps keeping these two together, would contribute to stronger adoption of market-based reforms.
- Public Trust Needed to Strengthen Market Processes? State ownership can mean continued politicization of stewardship issues. As such, increased public trust is needed to support the process of auctions and bring in greater investment to the region, leading to higher values for the land, hence greater stewardship.

4.5 The Challenges of Land Tenure Security in Developing Countries with an Uncoordinated Institutional Environment¹

• Many developing countries, for example in Eastern and Southern Africa, have initiated processes of land tenure reform in recent years. These have the potential to empower local communities and improve access to land for dryland communities. However, many governments are hesitating due to the political difficulties of the task.

- Due to the sensitive politics of land reform, the issues are often debated by politicians without sufficient dialogue with civil society or relevant government departments. Stakeholders can rarely participate in policy formulation processes, and results of official inquiries into land tenure may be kept confidential.
- For the first time, customary tenure systems, including communal ownership arrangements, are being supported (rather than ignored or outlawed) by some legal initiatives. However, conflict between the interests and mandates of key government departments are reducing the success of such initiatives.

Ethiopia provides an example. A long history of insecure, fluctuating, and ambiguous land tenure regimes has had negative impacts on public and civil service confidence in this sector. Since the promulgation of the national Constitution in the mid 1990s, land tenure has –on paper - been improved. The Constitution affirms that the land belongs to the people first, and the State second. Secondary land use rights, including the customary rights to access grazing land, water, forests, and other natural resources, are protected by the Environmental Policy.

However, many problems remain. The government has yet to formulate a comprehensive land policy, and many aspects of the Constitution have yet to be clarified and implemented. Land remains stateowned, leading to feelings of uncertainty over future tenure security. There is a general lack of policies supportive of common property regimes as are found in dryland areas. There are some conflicts in the mandates and activities of various government departments, and development has been uncoordinated as a result.

For example, development projects often contradict the constitutional rights of dryland peoples to access land and express their cultural identity. Expansion of large-scale commercial farms in dryland areas has prevented local people from accessing prime dry season grazing land, making survival during drought increasingly difficult. Agricultural projects, often donor-funded, have heightened communal tensions leading to an exacerbation of conflict in the area.

Conclusions:

- There is a need for integration of activities and mandates between different levels of government – a harmonization along the 'vertical' institutional axis. For example, there is urgent need for local bylaws that provide effective legal instruments to enforce national and regional policies.
- In addition to 'vertical' integration, 'horizontal' integration between sectors is also vital. Formulation of a comprehensive land use policy is a useful instrument for this task, as the legislation and policies of various sectors (e.g. environment, forestry water) should be revised to follow it. The ultimate source of authority, of course, should be the constitution.
- Land reform is a sensitive issue that should be addressed with caution but also with frankness. It should be tackled in a steady, transparent manner and all stakeholders should be involved, in order to build confidence in the process.

4.6 Collective and Private Land Tenure Reforms can Undermine Communal Cooperation

- Some systems of land reform seem to be in danger of creating a sense of the "tragedy of the commons", by making it harder for people to cooperate in traditional or modern structures to manage their common resources.
- Many regions have historically complex and varied land tenure systems. Applying generic "westernized" and "entrepreneurial-focused" land reform systems in areas previously under communal regimes may not always be the best solution.
- Instead of creating a system of entrepreneurship as planned in one region of Asia, people felt like the land tenure reform forced them into a situation where they were all "eating from the same ricepot."

In part of Central Asia, reforms aimed at rewarding farmers for increased agricultural production by initiating leases to small plots have instead created a tragedy of the commons. The system's small plot leases can be sought for a period of up to 30 years, and are both transferable and inheritable land use rights, which provides for privatization of stocks to small-holders. Unfortunately, the system failed to specify which rights were derived from the post commune "collective ownership" and has led to inconsistent transfers to villages and local political structures. Likewise, the system has failed to provide villagers with actual documentation of use rights, which has created even more chaos. *De facto* common property regimes were encouraged.

As a response to the incomplete and ineffective land reform in this area, locals began to demonstrate some of the entrepreneurship sought, through self-empowerment. They sought new and in some cases, highly innovative mechanisms to establish "co-operative management systems." But for inspiration, they turned to ancient traditional patterns of subsistence and organization, making the village into the basic unit of use and control for these systems.

Conclusions:

- Voluntary versus compulsory entrepreneurship? In some cases, a compulsory rights contract system, which is imposed from above by the state onto villages and rights-holders, is difficult for local people to assimilate. Local initiatives which 'bubble up' from villages can be recognized and supported. This self-organizational dynamic, in Asia, can be harnessed to encourage and develop stronger entrepreneurship through careful program design.
- Need to phase in accountability when phasing in rights? Systems need to be put in place to
 encourage greater transparency and accountability when land tenure reform is attempted in
 arid areas of Asia. The higher administration can otherwise seem omnipresent, leading to
 governance challenges and potential for rent-seeking. Greater decentralization of authority
 coupled with clear lines of responsibility, capacity building, and local empowerment could help.

4.7 "Privatizing Pastoralism" Can Lead to Unregulated Resource Use¹

• Recently, a process of transition to a market system has been taking place in certain countries of Central Asia, including through abolition of the collectives. The new land tenure systems

rely mainly on re-emergence of customary regulation and autonomous cooperation, especially based on kinship relationships. At higher levels, this appears to leave a gap between the formal legal and political structures, and the resumed customary forms.

 More certain authority and greater stability might be needed to bridge this gap. For example, herd stocks were re-privatized to small-holders, (though the land itself often remains stateowned), re-creating pastoralist grazing livelihoods. Considerable urban-to-rural migration by former collectives' technical personnel took place, to take up the newly privatized smallholdings. The relatively inexperienced former personnel started to overgraze near sedentary settlements.

Under the pre-socialist systems, some countries in Central Asia were ruled by the hereditary aristocracy or Buddhist clergy. The ownership was public, considered to reside in the monarchy. Tenant rights were held within customary fifes. The formation of new republics shifted ownership rights in land to the new state. Bond herding ended, and small herding dominated. Further fragmentation of region-plots was induced in order to reduce nomadism, which was seen as 'destabilising' the community. For example, livestock ownership limits were used to phase-in collectivization of herders into state farms. Collectivization processes effectively reintroduced yield-focused stewardship.

In the land tenure reform process, Central Asian lands previously occupied by collectives were also restituted to the families of former pastoralist herders, transforming the land use patterns. But without the collectives' surplus-marketing functions and other mechanisms, the increased incentive of smallholders was to build their herds, leading to increasing degradation of the open access resource. In addition, some winners in the privatization process became absentee herders. In one country, Mongolia, 95% of the land is vulnerable to desertification. A 1994 Land Law allows certain leasing arrangements and supports the regulatory authority of provincial Governors, but implementation needs to be more consistent in order to contribute to greater security of tenure and access to grazing for all pastoralists. The Land Law and its Civil Code also need to recognize and incorporate customary use patterns more fully.

Conclusions:

- Is 'Back to the Roots' Really Possible? Central Asian pastoralism after de-collectivization is still under considerable ecological stress. More careful regulation of the new systems of land use, and support for customary grazing regulations would strengthen the current system of private tenure.
- Hybrid Systems- Saving Grace or 'Coup de Grace'? The current arrangement encourages hybrid nomadic-sedentary patterns. But it is necessary to find ways to prevent the hybrid arrangement from leading to pressures from both sides. One way forward would be to develop incentives that are cooperative in nature, or training to help establish a culture of negotiated land use.
- In-Equities Play a Role: Increasing wealth gaps amongst herders has potential to foster social and political volatility. While a political movement is forming to encourage full private ownership of pastures, another option would be careful use of incentives to cooperate in better distribution of costs and benefits.

4.8 Conflict in the Drylands Zones Limits Options for Land Tenure Reform¹

- Due to ethnic conflict in some drylands, e.g. in South Asia, land tenure in war-affected regions has unique challenges. In war-affected areas, many people cannot access their land due to insecurity. For example, in Sri Lanka, land pressures have increased for the Tamils and other groups due to ethnic conflict.¹
- Clearer and better-defined systems would support reconciliations and development efforts, and contribute to confirm old and create new socio-political alliances among the communal (ethnic) groups.¹ Improved access to and possession of priority claims for resources can help to determine different coping strategies for villages in complex emergencies and in the peaceful areas.

In Sri Lanka, State-led land colonization had an important impact on the entitlements of Tamils, triggering grievances towards the government and the majority ethnic group.^{xxvii} Grievances over land resource distribution in large-scale settlement schemes have been major reasons for 'ethnicized conflict' in the East.^{xxviii}

Research findings confirm that resource entitlements in many areas of Eastern Sri Lanka are 'ethnicised': access to resources are unequally distributed among the three communal groups, which reinforces grievances among those who feel at the losing end.

State-run programs for the sustainable management of land resources in Sri Lanka offer valuable lessons for land reform. Two projects can be highlighted. First, Integrated Rural Development Programs address land degradation issues through local livelihood projects. These seek to reduce land degradation in critical areas, and to raise the living standards of the poorest communities - those who depend on the land for their sustenance. Second, Sri Lanka runs a Landslide Hazard Mapping Project, which seeks to regulate the development of housing and infrastructure on a sustainable basis in the Badulla and Nuwara Eliya Districts. The project was specifically designed to (a) provide landslide hazard assessment, (b) ascertain socio-economic problems of resettlement and (c) create awareness among resident communities about the adverse impacts of improper land uses. These projects offer hope for conflict situations.

Conclusions:

- Focus on the poor? In combating land degradation, there is a need to recognize the importance of concentrating initially on the poorer segments of the farming population within the critical areas.
- Moving the reforms from land to land-users? In early projects in Sri Lanka, the focus was on the land, to conserve and stabilize areas that had been degraded. In later projects the emphasis has shifted from the land to the land users. This new focus has generated considerable improvements, by recommending a set of soil conservation measures to land users, and providing them with incentives in the form of subsidies and cash payments. Such subsidies need to be adjusted or more carefully targeted to ensure they do not favor the more affluent farmers.
- Sustainability... of the effort itself? By and large land users have been encouraged to change their current land use practices mainly through the provision of material incentives. The project

can build-in provisions to encourage increasing self-sufficiency for farmers vis-a-vis external agents, to ensure that interest in conservation measures continues once assistance ceases.

4.9 Water Development in the Drylands can Change Land-uses and Bring Conflict

 In the Senegal river basin during the late 1980s, plans to construct a major dam, which would change the flow of water in the region and allow for increased agricultural opportunities, had explosive consequences. The market value of some land increased greatly, and the political elite in Mauritania therefore moved to disenfranchise many of the inhabitants, especially those with secondary user rights. This legal move was accompanied by a campaign to strip many of the affected people of their citizenship, which angered neighbouring Senegal, and triggered a tit-for-tat cycle of expulsions and violence.

This case is just one of many recorded conflicts over land in West Africa and elsewhere, where land is, "one of the most commonly recurring causes of conflict throughout recorded history".¹ But the conflict was triggered by an anticipated change in land use, from low-input, seasonal cultivation and grazing, to intensive commercial farming, and as such it was a 'modernization' conflict. It shows that the fate of drylands, and the people who rely upon them, are intimately linked to the utilization of water resources. The dam project was initiated in good faith, with the aim of increasing irrigated agriculture, generating electricity, and making the river navigable. However, the project's impacts on dryland land uses indirectly contributed to massive social upheaval, inequitable land reform, and a situation of potential international conflict. In addition, land degradation in the region, combined with devastating drought, made land-use changes a priority for the governments in the region.¹ A more sustainable drylands scenario could have minimized the political and economic pressure for the dams and thus avoided conflict.

Conclusions:

- Land reform can be used for exclusivist and inequitable purposes: upholding the "rule of law" becomes a less inspiring vision when the political situation means that the rule of law itself is unjust.
- More recently, greater political will has emerged in the region for equitable land use regimes. In some instances, pastoral land use zones have been established, mechanisms for conflict resolution have been designed, and customary rules have been supported by law, with the support of international institutions. International legislation, including the UNCCD, has also proved a powerful incentive for change.¹

4.10 Land Tenure Reform Requires Effective Legal Systems

 In order to provide foundations for continued economic recovery and rural growth in many parts of Central America it is necessary to improve tenure security, both for productivity and equity. Poverty reduction strategies in the region highlight land regularization as a priority to revive economic growth and improve the livelihood of the poor (e.g. Government of Nicaragua, 2000). • But for these projects to be effective in the long term, the legal nature of the reform must be secure. And greater public participation and awareness is necessary, including for innovations aimed at improving the lot of women.

Nicaragua, like other countries in the region, suffers land degradation due to deforestation, drought and natural disasters (such as Hurricane Mitch). With a population density of 30 inhabitants per km2, land is relatively land abundant, but land tenure systems are either concentrated or highly insecure.^{xxix} In 1979, more than 52 percent of Nicaragua's total area was owned by 4 percent of Nicaraguan families, and there were also significant foreign holdings in the country.^{xxx} Drylands make up about 15% of the territory and are home to 50% of the population. In the 1980s, large tracts of lands were re-distributed through agrarian reform programs. However, these included much land the government did not legally own, sowing seeds of continuing property rights insecurity.

At present the legal system is the weakest link in the formal titling process and must be significantly bolstered and transformed to protect emerging property interests. Although some adjudicatory functions are handled by a specialized administrative office, many property claims are referred to the courts, which are notoriously slow to produce rulings and often unable to guarantee enforcement. Recent case studies illustrate that the poor spent considerable amounts of money or even had to sell portions of their lands to hire lawyers to defend their land claims in dubious legal cases^{xxxi}.

However, legal issues are not the only problems. Gender-sensitive land reform laws, in order to ensure equal treatment of women, have ensured titles are issued jointly to husband and wife.^{xoxii} But although 80% of new titles in Nicaragua were issued jointly, less than 20% of these are held jointly today. Surveyed landholders may not be aware of the exact nature of their documents, or wives might actually sign away their part. For this aspect, greater awareness-raising efforts are needed, or issuance of joint titles may have limited impact on actual decisions and thus not serve to improve women's position.

Conclusions:

- Legal validity and official recognition of the titles issued is essential. Unless definitive and enforceable resolutions to the present conflicts over property and compensation can be reached, these benefits will remain nothing more than speculation.
- Formal titling must be supported by steady improvements in the financial, technical, educational, and political resources. There is also a need to ensure local community participation in titling programs, and it is essential to resolve property and compensation disputes, with all the legal and political changes that this will entail.

5. General Lessons Learned

The formulation of land tenure systems must be a strategic process, involving analysis of the dynamic nature of dryland livelihoods in the 21st century. The case studies above reveal a series of general lessons learned. Drylands have complex ecologies and can shift quickly from a productive to unproductive state - and vice versa. In many regions, drylands are occupied by the poorest of peoples, who depend on these lands for their livelihoods. The needs of poor dryland communities are often overlooked in policymaking, particularly when decision-making is concentrated in urban areas.

There is now an urgent need to focus on the poorest of the poor, but draw lessons from all experiences.

Legal Pluralism and Hybrid Systems are Common

In many areas, modern and customary land tenure systems co-exist. Modern legal systems of access to and ownership of forests and water sources often contradict customary laws which often provide complex, variegated access to individual resources. This contradiction sometimes threatens local communities and the management systems they have successfully adapted over centuries. Codification of customary regimes poses enormous administrative and conceptual challenges for many countries. Legal systems, including land tenure reform attempts, must try to fit local circumstances by addressing the ecological, socioeconomic, land-use, historical and cultural characteristics of the people living in the drylands. The local level may often be the most effective place to for tackle specific tenure systems.

There are many examples of the re-emergence of customary regulation and autonomous cooperation based on kinship and families. Hybrid or 'pluralist' systems of land tenure reform eventually result. In these instances, sensitive governance and active community participation becomes key to ensuring equity and addressing transition challenges from informal to formal ownership, ensuring inclusion of all those most affected.

Eating from a Common Rice-Pot: Tragedy of the Commons in the Drylands?

Several issues related to the concept of the "tragedy of the commons" emerge. he applicability of the term varies widely. While customary tenure systems are never perfect, and are generally being eroded by processes of 'modernisation', they can be more resilient than many outsiders believe. They may seem inactive because they are often 'invisible', and unwritten. Only if they break down completely, or are highly contested, do they represent a tragedy of the commons, in which 'open access' leads to unsustainable use of resources.

Even carefully planned 'modern' property regimes can lead to such a tragedy if they are not acceptable to local people. There is strong need for further exploration of whether and how either collective or individual rights in situations where rights are insecure and tragedy is looming. Locally-tailored solutions should be sought and supported.

Land use planning which takes care of the various stakeholder interests is essential. Planning should be a participatory, on-going *process*, and inclusive of all stakeholders. Furthermore, instruments for the implementation of national land use policies need to be harmonized including administration and information systems. Harmonization of the sectoral policies and legislation – e.g. laws on water, forests, and environment - need to be addressed, integrating the concerns and livelihood needs of drylands communities.

Effective institutions to resolve conflicts or disputes are required including transparent local land/resource tribunals incorporating legitimate customary practice, third party mediation and processes for equitable allocation of natural resource rights. Conflicts with deep and unresolved historical and inter-ethnic inequalities in land distribution and resource access require special attention including building of trust and consensus between different interest groups and cultivation of political will.

Managing Fragile Environments – a Holistic Strategy

New land management practices, especially when drawing from adapted traditional systems, have the possibility of improving livelihoods and addressing poverty and food security. Most successful land tenure efforts in dryland environments have been implemented as part of a wider 'package' of land management improvement, including institutional strengthening and technical backstopping. These examples of best practice have also taken the environmental realities – the physical distribution of natural resources across a wide landscape – and the social, cultural, and economic realities, as their starting point; rather than assuming that existing top-down administrative structures can succeed. In addition, they have been co-ordinated with policy processes and development programmes which create an enabling environment for alternative sources of livelihood which provide income for investment into drylands. Inclusiveness, transparency and accountability are the hallmarks of successful approaches.

Land + Tenure = Collateral? Not an Automatic Equation

Legal titles to land do not necessarily open up opportunities for credit in poor agricultural areas. If there is little confidence that broader legal systems will enforce loan/debt recovery (due to high transaction costs involved), or land markets do not appear to be functioning, formal title often has little value as collateral. These conditions lead to low demand, and few investors. In addition, land 'ownership' as a means to credit access is not always appropriate in drylands where communities enjoy overlapping user rights to a variety of resources including arable land, grazing and forests.

Land Tenure Security Requires More Than Titles

Legislation is just one of the mechanisms necessary for land tenure security. Processes such as recognition of informal rights of use and occupation, codification of tenancy and sharecropping agreements and establishment of cooperative ownership should be supported by land administration and management institutions, which are vital for effective governance. It is crucial that land administration institutions are accessible to ordinary people in drylands and recognize the complexity of land rights on the ground.

Well-functioning rights and land institutions underpin economic development and help reduce corruption and social conflict. Democratic land use planning to mediate effectively between competing interests amongst land users in the drylands is crucial. In addition to land tenure security, specific conditions must be in place to encourage investment, such as better access to input and product markets, including savings and credit; appropriate technologies for higher, sustainable productivity, and opportunities to diversify both within and beyond pastoral and agro-pastoral livelihoods.

6. What Can Decision Makers Do?

Poverty, land degradation and desertification lead to loss of livelihoods, especially for vulnerable drylands dwellers. In this Challenge Paper, we have revealed that these are manifestations of deeper structural social and economic problems, including land pressure, lack of access to land, poorly-defined land tenure regimes, and poorly managed land reform efforts. Several preconditions can be recognized, which lead to specific sustainable development recommendations.

Challenge 1: How can we ensure that land tenure systems and land tenure reform processes are truly participatory, accessible, and transparent?

Commit to Transparency and Public Participation in Land Tenure

The efforts must be coupled with strong commitments to accountability, transparency and public information-sharing. This helps to ensure sustainability of the effort, and reduces the possibility that laudable goals are subverted by other interests. Decision-makers can explore multi-stakeholder approaches to identifying and responding to land use and land reform challenges. Past failures to combat desertification have been linked to a lack of local resource-user involvement and to an absence of solutions compatible with indigenous cultures and land tenure systems.

Challenge 2: What institutional structures can be established at local, national and international levels to support legal aspects of land tenure security and reform?

In many cases, especially in emerging and transforming economies, land markets may require some state intervention. By themselves, markets will not do much to transfer land to the poor.

Careful re-distribution of public lands, or state expenditure on land reclamation and subsequent allotment as private property can make assets available to those too disadvantaged to enter into normal land market transactions. Support is also needed for institutions to administer the necessary land acquisition and distribution mechanisms, and to advise prospective land owners.

It is important to develop effective, accessible information systems which provide data on land use patterns, land values, availability of water, traditional land-users and title-holders.

An accessible land registration system is also vital. In the best cases, this also involves public information efforts to encourage those with valid claims to come forward. Establishment of forums for public consultation and involvement in decision-making, and for peaceful dispute resolution, is also crucial.

Challenge 3: How can national processes address the overlaps and contradictions between formal and informal, customary and modern land tenure systems, and 'hybrid' systems?

A key is developing systems of land tenure which respect local and customary traditions. Harnessing community traditions of self-organization, has emerged as a key to successful land tenure reform. Policies can also explore creative approaches to the use of customary land systems, including in some instances their codification. It is important however that the communities coming under such codified systems are highly involved in the process and are 'self-identifying', as issues of communal identity are often complex and contested.

Challenge 4: How can the rights of marginalized groups, including, women to control over land be promoted and protected?

Special emphasis is needed on developing ways to ensure that marginalized groups -- be they pastoralists, nomadic groups, poor dryland communities, or women -- are able to benefit from land distribution programs. Legal means – such as joint titles for married couples – could be accompanied by awareness-raising and civic education exercises.

Gender-sensitive technologies and natural resource management systems – addressing access to water, for example – also have great potential.

Challenge 5: How can land tenure systems and land tenure reform processes take a holistic, comprehensive and co-ordinated view of the institutional and physical environment?

Land issues can have international repercussions where resource degradation (e.g., land or water) or tensions arising from it spill into neighbouring countries. Regional approaches are useful, and developed countries and other donors can and must increase their commitment to provide technical support, skilled personnel and funds to local administrative units responsible for areas suffering land degradation.

Also, policies need to be set in place to protect and manage the natural resource base for economic and social development. Land reform efforts are particularly successful when built on the foundations of broader natural resource management and income-generation programmes to enhance sustainable livelihoods in vulnerable areas.

7. Further Challenges

At current levels of international assistance on these issues, many developing countries lack the institutional structure, financial resources, human skills, and information systems needed to carry out sustained land tenure reform. These constraints have already been present for many years. Are there innovative ways to escape the deadlock on these issues? How might new resources be harnessed? What capacity is there to increase legal and academic attention to these issues and to support the further development of the necessary skills within the ranks of policymakers and administrators?

A special focus is needed to ensure sustainable development for Africa. As revealed above, African drylands face some of the most difficult challenges, partly as a legacy of colonialist land tenure systems and inadequate reform efforts. Decision-makers should promote and support efforts and initiatives to secure equitable access to land tenure. Policies need to clarify resource rights and responsibilities, through land and tenure reform processes that respect the rule of law and are enshrined in national law, and provide access to credit for all, especially women. These policies must focus on enabling economic and social empowerment and poverty eradication as well as efficient and ecologically sound utilization of land. They need to ensure that women producers can become decision makers and owners in the sector, giving women the right to inherit land.

Land degradation, reduced access to land, climate variability, water scarcity, and desertification have turned some communities into "environmental" refugees--that is, people have left their lands due to lack of access to viable natural resources, though they often have no other secure lands to go to. Little attention has been placed on this issue to date. The definition of refugees contained in the 1951 Geneva Convention on Refugees is not sufficiently broad to include the case of environmental refugees. While some early projections of the scale of this phenomenon were overly pessimistic, and paid insufficient attention to the coping strategies available to people suffering from environmental stress, the concept remains a valid one. Clearly, environmental change may only be one factor in a variety of problems causing migration; still, the question of whether "environmental" migrants deserve special treatment, and how this intersects with other human rights principles warrants considerable exploration. Such long-term issues require attention at the level of international law as well as national laws and constitutions.

How will drylands be affected by movements of people in the coming decades (either due to economic forces, conflict or population growth)? There is little prospective thinking underway on the intersection of nature, society and economy in drylands. Also, while much attention is paid to rapid urbanization

(especially in Africa), it seems that the focus is on capital cities, while insufficient attention is paid to population drift towards secondary rural towns which will be the 'frontline' of the phenomenon in the future.

Many studies implicitly reject the idea that sedentarization is a desirable objective of land reform. In some places, negative perceptions of dryland livelihoods – especially pastoralism – have been tempered by evidence of their viability. However, there has been a lack of committed follow-up in terms of creating an enabling environment for livelihood diversification and protection of the ecological and institutional foundations of pastoralism. However, some governments still explicitly or implicitly see sedentarisation as a desirable goal. Evidence from communities that have both gained and suffered economically from such processes would considerably enrich this discussion.

The status of customary land laws also warrants considerable further exploration. In most instances, governments lack a sophisticated understanding of the content, values and principles in customary laws. Greater understanding of these systems could help generate more sophisticated ideas for synergy between customary and formal legal systems. In some instances, states can consider the possibility for formally acknowledging a system of legal pluralism, particularly where such systems already function side-by-side in practice. One particular legal issue that emerges many times is - what are the alternatives to the registration of collective rights under the names of individuals? How can formal legal systems based on individual rights accommodate the notion of collective rights and ensure the distribution of benefits among communities, without inadvertently reinforcing inequities that may persist within the communities? This debate could be informed by lessons from the work on intellectual property rights for traditional communities, which addresses benefit-sharing for members of communities who possess valuable ethno-botanical knowledge, for example.

This paper raises many questions and challenges. There are few simple or straightforward answers. The challenge facing policy-makers, academics, nongovernmental organizations and members of dryland communities is to engage in a sustained, inclusive, and honest process of dialogue. Without such a process, the future is grim for the economies of many developing countries and the people of the drylands.

8. Bibliography

Adams, Martin, et al., Overseas Development Institute, Land Tenure Reform and Rural Livelihoods in Southern Africa, available at http://www.oneworld.org/odi/nrp/39.html.

Adams, Martin, Overseas Development Institute, Land Reform: New Seeds on Old Ground?, available at http://www.oneworld.org/odi/nrp/nrp6.html (last updated Oct. 1995)

Agarwal, Bina, "Who Sows? Who Reaps? Women and Land Rights in India," 15 J. Peasant Stud. 531 (1987/88)

Agarwal, Bina, A Field of One's Own: Gender and Land Rights in South Asia (Cambridge University Press 1994).

Anders Rapp, Why Do We Need A Scientific Analysis Of Dryland Degradation In Africa?, In Land Management And Survival 109, 111 (Anders Hjort Ed., 1985).

Anderson, Terry L. & McChesney, Fred S. eds., *Property Rights – Cooperation, Conflict, and Law* (Princeton University Press: Princeton, 2003)

Annorbah-Sarpei, A. James et al., The Importance of Participatory Approaches for Dry Land Management and Anti-Desertification Programs 5 (New York, Ny: Synergos Institute, 1993).

Axelrod, Robert & Hamilton, William D., "The Evolution of Cooperation", 211 Science 1390 (1981).

Beaumont, Peter, Environmental Management & Development In Drylands 3-8 (1989).

Blomquist, William & Ostrom, Elinor, "Institutional Capacity and the Resolution of a Commons Dilemma", 5(2) Pol. Stud. Rev. 383 (1985)

Bromley Daniel W. et al., Making the Commons Work (1992).

Carlston, Kenneth S., Social Theory and African Tribal Organization: The Development of Socio-Legal Theory 287 (1968)

Carlston, Kenneth S., Tribes Without Rulers 26 (John Middleton & David Tait eds., 1958)

Cheapoo, Chea, "Tribal Africa: The System of Land Use and Ownership", 2 N.C. Cent. L.J. 151 (1970)

Christodoulou, Demetrios, *The Unpromised Land: Agrarian Reform and Conflict Worldwide* (1990)

De Moor, Jap & Rothermund, Dietmar, eds., *Our Laws, Their Lands – Land Laws and Land Use in Modern Colonial Societies* (Lit Verlag:Hamburg, 1994)

Dixon, John A. et al., The Economics Of Dryland Management 1 (1989).

Dorner, Peter, *Latin American Land Reforms in Theory and Practice – A Retrospective Analysis* (University of Wisconsin Press:Madison, 1992)

Dunning, Brian C., A Comparative Study of Legal Ideology: African Land Tenure Women and the Environment, A Reader: Crisis and Development in the Third World (Sally Sontheimer ed., 1991).

Eckholm, Erik P., The Dispossessed of the Earth: Land Reform and Sustainable Development (1979).

Food and Agriculture Organization of the United Nations, *The Role of Legislation in Land Use Planning for Developing Countries* 76-86 (1985).

Garcia Hierro, Pedro *et. al.*, Liberation through Land Rights in the Peruvian Amazon (IWGIA:Copenhagen, 1998)

Geisler, Charles & Daneker, Gail, eds., Property and Values – Alternatives to Public and Private

Ownership (Island Press:Washingston, 2000)

Gima, Lino & Berkes, Fikret, "Natural Resources: Access, Rights-to-Use and Management", *in Common Property Resources: Ecology and Community-Based Sustainable Development* 33 (Fikret Berkes ed., 1989).

Hanna, Susan & Munasinghe, Mohan, *Property Rights and the Environment: Social and Ecological Issues* (1995)

Hanna, Susan," Summary of a Workshop on Property Rights and Natural Resources", 7 Soc'y & Nat. Resources 595 (1994)

Hardin, Garrett, "The Tragedy of the Commons", 162 SCIENCE 1243 (1968)

Heathcote, R.L., The Arid Lands: Their Use And Abuse 27 (1983).

Kotschi, Johannes et al., Towards Control Of Desertification In African Drylands: Problems, *Experiences, Guidelines* 28 (1986)

Lind, J. and Huggins, C. (2000) *Conflict and Local Adaptation to Environmental Change in Africa* – *A Background Paper*, African Centre for Technology Studies (ACTS), unpublished

Minh-ha, Trinh T., "When the Moon Waxes Red: Representation, Gender and Cultural Politics (1991).1995).Systems", 10 B.C. Third World L.J. 297 (1990).

Mohantry, Chandra T., *Under Western Eyes: Feminist Scholarship and Colonial Discourses*, in The Post-Colonial Studies Reader (Bill Ashcroft et al. eds.,)

Montgomery, John D. ed., *International Dimensions of Land Reform* (Westview Press: Bolder, 1984)

Nye, Joseph S. Jr., *International Dimensions of Land Reform* 7, 12-16 (John D. Montgomery ed. 1984)

O'Rourke, Nancy, "Land Rights and Gender Relations in Areas of Rural Africa: A Question of Power and Discourse", 4 Soc. & Legal Stud. 75 (1995).

Ostrom, Elinor, *Governing the Commons: The Evolution of Institutions for Collective Action* (1990).

Oyanguren, A.F., 1996, Resumen de la Presentación del Instituto Nicaragüense de Reforma Agraria (INRA), International Conference on Land Tenure and Administration, Orlando, Florida.

Prosterman, Roy et al., Agrarian Reform And Grassroots Development 311 (Roy L. Prosterman et al. eds., 1990).

Prosterman, Roy L. & Riedinger, Jeffrey M., *Land Reform and Democratic Development* (The John Hopkins University Press:Baltimore, 1987)

Salih, Mohamed M. A., *Environmental Politics and Liberation in Contemporary Africa* (Kluwer Academic Publ.:Dordrecht, 1999)

Sanchez Jordan, Maria Elena & Gambaro, Antonio, eds., *Land Law in Comparative Perspective* (Kluwer Law International: The Hague, 2002)

Scones, Ian, Living With Uncertainty (1994).

Shivji, Issa G., Not yet democracy: reforming land tenure in Tanzania (IIED, 1998)

Spooner, Brian, *Rethinking Desertification: The Social Dimension, In Desertification And Development: Dryland Ecology In Social Prespective* 1, 13 (Brian Spooner & H.S. Mann Eds., 1982)

Strasma, J., 1996, Titling Beneficiaries of Urban Reform in Nicaragua, International Conference on Land Tenure and Administration. Orlando. Florida.

Thomas, Alan et. al., Environmental Policies and NGO Influence - Land degradation and sustainable resource management in sub-Saharan Africa (Routledge:London 2001)

Von Hoffmann, Bernd & Hwang, Myong-Chan, Developments in Land Law (Land:Frankfurt am Main, 1999)

Wanjala, Smokin C., Essays on Land Law - The Reform Debate in Kenya (Faculty of Law:Nairobi, 2000)

Women's Access to Land Still Restricted by Tradition, 22 Women's Int'l Network News 12, (Autumn 1996).

ⁱ Desertification means the conversion of useable drylands into unproductive land that cannot support agriculture or settlement and is caused mainly through intensification of land use and deforestation.

¹ Martin Adams, Overseas Development Institute, Land Reform; New Seeds on Old Ground?, available at http://www.oneworld.org/odi/nrp/nrp6.html (last updated Oct. 1995)

ⁱⁱⁱ Jim Riddell, Contemporary Thinking on Land Reform (Rome: FAO, 2000).

^{iv} Rukuni, M. (2000) Land Tenure and Sustainable Development in Africa, Paper presented at Scandinavian Seminar College Conference on African Perspectives of Policies and practices Supporting Sustainable Development, 2000

See Cousins, B (1996) Conflict management for Multiple Resource Users in Pastoralist and Agro-Pastoralist Contexts, IDS Bulletin Vol 27 No 3, Institute for Development Studies, Sussex

^{vi} See Unruh, J. (1995) The Relationship Between Indigenous Pastoralist Resource Tenure and State Tenure in Somalia, GeoJournal V 36 (1), Kluwer Academic Publishers

See Huggins, C. and Gichuki, F. N., (2000) Irrigation in the Drylands of Kenya: impacts on local uses of natural resources. Paper presented at the Regional Biodiversity Forum. Mombasa. 21st-23rd Feb 2000 ^{viii} Ibid.

^{ix} Jodha, N.S. Rural CPRs – A Growing Crisis, iied Gatekeeper Series No. 24

^x Desertification means the conversion of useable drylands into unproductive land that cannot support agriculture or settlement and is caused mainly through intensification of land use and deforestation.

See Ellsworth, L. (2002) A Place in the World: Tenure Security and Community Livelihoods, A Literature *Review*, Forest Trends, Washington DC/ Ford Foundation. New York

^{xii} See Hardin, G. (1968) The Tragedy of the Commons, *Science (162)*

xiii Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August- 4 September 2002 available at: http://www.johannesburgsummit.org.

xiv Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August- 4 September 2002 available at: http://www.johannesburgsummit.org.

^{xv} Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August- 4 September 2002 available at: http://www.johannesburgsummit.org.

^{xvi} United Nations Conference on Human Settlement Global Plan of Action.

^{xvii} United Nations Declaration on Human Rights, at Article 17, contains a commitment to such rights. While a Declaration is not binding in international law, it has been convincingly argued that many principles enshrined in this Declaration are *ius cogens* norms. Also, the European Convention of 1950 at Protocol 1 1952 recognizes the right to peaceful enjoyment of property; the American Declaration of 1948 at Article 23 recognizes the right to property and in a binding corollary, so does the American Convention of 1969 at Article 21. The African Charter of 1981 does as well, with greater specificity, at Articles 14, 20, 21 and 22. See also the (binding) International Convention on Civil and Political Rights 1976 (self-determination), and the International Covenant on Economic, Cultural and Social Rights 1966, Article 11 (living and housing) and Article 15 (intellectual property rights). [Must include the proper citation formats here]. ^{xviii} Rural Land Reform 24 (David Fig & Catherine Kell eds., 1992).

xix See Mortimore, M, Adams, B, and Harris, F Poverty and Systems Research in the Drylands, iied Gatekeeper Series, No. 94

^{xx} Adapted from Lind and Huggins (2000).

^{xxi} Rukuni, M. (2000) *Land Tenure and Sustainable Development in Africa*, Paper presented at Scandinavian Seminar College Conference on African Perspectives of Policies and practices Supporting Sustainable Development, 2000

^{xxii} See Huggins, C. and Gichuki, F. N., (2000) *Irrigation in the Drylands of Kenya: impacts on local uses of natural resources*, Paper presented at the Regional Biodiversity Forum, Mombasa, 21st-23rd Feb 2000 ^{xxiii} See Unruh, J. (1995) The Relationship Between Indigenous Pastoralist Resource Tenure and State Tenure in Somalia, *GeoJournal V 36 (1)*, Kluwer Academic Publishers

^{xxiv} Jim Riddle, Contemporary Thinking on Land Reform (Rome: FAO, 2000). See also Herrera, Adriana; Jim Riddell and Paolo Toselli, "Recent FAO experiences in land reform and land tenure". In Land Reform, Land Settlement and Co-operatives. 1997/1. Rome, FAO.

^{xvv} Cherryl Walker, 1998, Land Reform and Gender in Post-Apartheid South Africa. UNRISD News No. 18: 4-6. ^{xvvi} See Aw-Hassan, Aden, Mohamed Alsanabani, and Abdul R. Bamatraf. 2000. "Impact of Land Tenure and Other Socioeconomic Factors on Mountain Terrace Maintenance in Yemen." CGIAR System-Wide Program on Property Rights and Collective Action, International Food Policy Research Institute, Washington, DC. (Series: CAPRi Working Paper, no. 3). (Working Paper). See also the Center for Archaeology of the Middle East Landscape, 2000 *The Oriental Institute Archaeological and Environmental Investigation of Yemeni Terraced Agriculture* http://www-oi.uchicago.edu/OI/PROJ/CAMEL/YEMEN/Yemen.html Oriental Institute, University of Chicago, USA. And see the International Centre for Agricultural Research in the Dry Areas 2000 *ICARDA Annual Report: Improving Rural Livelihoods in the Yemeni Mountains through Integrated Natural Resource Management* http://www.icarda.cgiar.org/Publications/AnnualReport/2000/Project%204.1/Project4.1.html Aleppo, Syrian Arab Republic.

xxvii See Goodhand 2001

xxviii See Mahaveli, Gal Oya, cf. Klingebiel & Rösel 1999.

xxix Paige 1997

- ^{xxx} Oyanguren, 1996
- ^{xxxi} See Merlet and Pommier, 2000

^{xxxii} Deere and Leon, 2000