THE FORGOTTEN BILLION

MDG ACHIEVEMENT IN THE DRYLANDS

United Nations Development Programme | United Nations Convention to Combat Desertification

… populations of drylands include the poorest, the hungriest, the least healthy and the most marginalised people in the world.

REMEMBERING THE FORGOTTEN BILLION

As the world reviews its progress in tackling poverty in its many dimensions, this document offers a fresh perspective on that task. It assesses the issues of MDG achievement not through the lens of national boundaries but through the framework of natural endowments. This reminds us that the populations of drylands include the poorest, the hungriest, the least healthy and the most marginalised people in the world. In many areas, the natural resources on which their livelihoods depend are degraded in ways that contribute directly to their low levels of well-being.

The people of the drylands need greater assistance, but devising and implementing the right policies will not be enough for MDG achievement. Crucial though they are, dryland-focused policy options need to be part of a greater endeavour to mainstream drylands issues into development frameworks. Only then can the forgotten billion escape poverty.

For too long, the drylands have been overlooked by political and business leaders the world over. Now is the time to reverse this history of neglect. Spotlighting drylands offers great untapped potential, certainly in terms of MDG achievement but also because many of our planet's drylands represent some of the last great frontiers for economic development.

BUILDING BLOCKS FOR A DRYLAND STRATEGY

Making the most of dryland opportunities means developing and implementing, through a participatory process, an integrated strategy that will achieve three aims: enhancing the economic and social well-being of dryland communities, while enabling them to sustain their ecosystem services, as well as strengthening their adaptive capacity to manage environmental (including climate) change. This strategy should:

- Upgrade the knowledge base, improve knowledge sharing, and close the gap between science and development practice to make best use of technology and foster sustainable management. This includes improving understanding of dryland ecosystems (e.g. seasonality, variability, ecosystem services such as water).
- Reassess the total economic value of ecosystem services, to correct systemic undervaluation in national planning and policy, and improve well-being.
- Promote sustainable public investments in natural resources, to reverse decades of relative neglect, provide better incentives for private investment, and recognise small-scale environmental investments.
- Turn the growth of markets into an opportunity to remove barriers to participation, and to use more efficient, accessible and equitable markets as a pathway to sustainable development.
- Support institutional changes to strengthen rights to natural resources, reform inequitable distribution, better manage risk, and increase resilience in the human-ecological system.

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The report is available at www.unccd.int/ and www.undp.org/energyandenvironment.
It will be modified on the basis of a peer review process.

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For more info visit:
www.undp.org/energyandenvironment and **www.unccd.int**

CONDITIONS FOR SUCCESS

The experiences of countries striving to achieve the MDGs show that no single approach brings success across the board. Nonetheless, attempts are being coordinated in support of the United Nations Convention to Combat Desertification (UNCCD), the only global treaty focused on developing countries and on improving living conditions, as a catalyst to reduce poverty and improve environmental sustainability in drylands. Partnership lies at the heart of the UNCCD, casting resource users and their communities as central to the solution rather than part of the problem. Assessment of MDG Country Reports highlights five broad conditions for success, with some policies valid in both drylands and non dryland areas and others specially focused on dryland-specific circumstances.

Country-led development and effective governance.

National development strategies must fully incorporate the needs of dryland populations through consultation and participation. Effective MDG implementation also requires representative political structures, accountable institutions and public servants who have adequate incentives. Kenya, for instance, decided to address regional disparities by establishing the Ministry of Development of Northern Kenya and other Arid Lands to develop specific strategies in its drylands. Synergies in MDG achievements advocate multi-sectoral approaches. Policies towards drylands are, in effect, a special case of regional development.

Inclusive and pro-poor economic growth.

In most drylands, improving farming system productivity is essential, particularly by increasing inputs (fertilizers, credit, better seeds and water management). Identifying comparative advantage is key to stimulating agricultural growth. Where market access is good and soils suitable, small-scale irrigation development may yield the highest returns. Extensive livestock production may have comparative advantage in areas with low crop potential, particularly if remote and sparsely populated (e.g. West Africa and the Altiplano-Puna of the Central Andes). The private sector is vital to these strategies, but needs public investment in transport and communications, property rights, and technology transfer.

Public investment in education, health and basic services.

Combining mobile and static health services will best meet the needs of mobile pastoralists, with purely mobile services attached to static units to ease costs and managerial logistics and to link herders with conventional formal service provision. Similar links between mobile tent schools and pastoralist boarding schools serve the same functions for mobile communities' educational services. Teachers and health workers should be recruited from within the pastoralist community, ensuring cultural sensitivity.

The importance to MDG achievements of basic infrastructure such as water, sanitation, transport and communications is also paramount. Where extensions to national networks are not realistic, innovative decentralised solutions at the community level should be used.

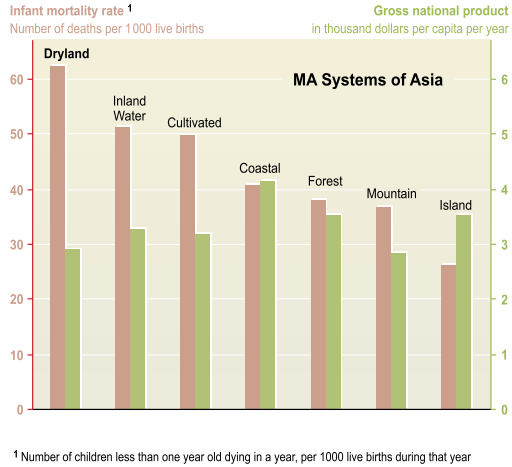
Targeted interventions: social assistance and public employment programmes.

Targeting benefits to the poor by geographical location is simple, cost-effective and can reduce poverty significantly. Government programmes providing income support and cash transfers to households which still lag behind, despite help from other policies, can work as well in rural drylands as in any disadvantaged area. Government-backed guaranteed work schemes, such as in India, can provide the labour to regenerate the rural sector through infrastructural improvements and enhanced agricultural productivity.

Climate adaptation and low-carbon development.

Helping households manage risk and reduce climate-driven shocks is a priority. Policies include developing more climate-resilient varieties of crop and livestock, and reducing vulnerability by improving market access and increasing incomes. Governments can help further in pastoral drylands by underwriting livestock insurance schemes.

Comparative advantage in some drylands is in new opportunities related to climate change. Where appropriate, policy-makers should pursue projects involving carbon sequestration and renewable energy (solar, wind and biomass). Ecotourism is a suitable alternative development pathway in other drylands, effectively involving payments for ecosystem services.



[1] Number of children less than one year old dying in a year, per 1000 live births during that year

Source: Millennium Ecosystem Assessment

Chart 1
Comparing infant mortality and GNP in drylands and other MA systems in Asia

THE FORGOTTEN BILLION

Home to more than 2 billion people in nearly 100 countries, drylands cover about 40% of the world's land surface (see Map 1). They are, however, habitually perceived as peripheral and unimportant and thus neglected by political and business communities. Many dryland inhabitants depend directly upon a highly variable natural resource base for their livelihoods and globally about half of these people are poor.

Achieving sustainable development in the drylands thus has significant implications for the Millennium Development Goals (MDGs). In short, it is impossible to halve world poverty and hunger by 2015 unless life is improved for the poor people of the drylands: the 'forgotten billion'.

Drylands embrace a variety of environments – including sandy deserts, temperate grasslands and savanna woodland – but all have their aridity in common. Rainfall totals vary greatly from year to year and over short distances, resulting in a group of physical environments characterised by dynamism. Most drylands are located in developing countries and the majority of dryland peoples – some 90% – live in these countries.

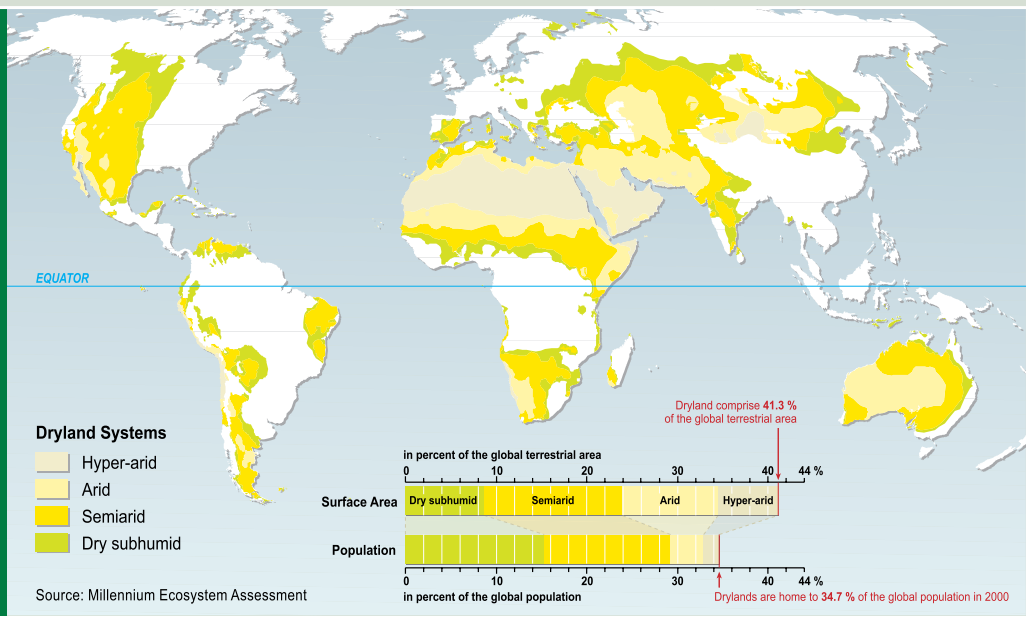
Most rural dryland livelihoods rely on herding and/or rain-fed cultivation. Long experience of coping with environmental dynamism has engendered numerous strategies for managing risk and variability, but many dryland inhabitants remain vulnerable to perturbations, particularly drought, and longer term ecological decline or desertification. Water scarcity underpins many of these change variables: one third of humanity lives in drylands but they enjoy just 8% of the world's renewable water supply.

GLOBAL SIGNIFICANCE

Despite the challenges of living in drylands, these areas have been inhabited for thousands of years. Today they underpin the global food supply, supporting about half the world's livestock and major areas of cereal production in the North American Great Plains, Argentina's Pampas and the wheat belts of Ukraine and Kazakhstan. Drylands are also the setting for major world cities such as Beijing, Cairo, Karachi, Los Angeles and Mexico City.

These simple facts explode the myth that all drylands are empty, barren places with little economic value. They also highlight the truism that drylands do not exist in isolation. In biophysical terms, drylands have a planetary influence as vast sources of soil dust, material that affects soils, oceans and the atmosphere far beyond the dryland realm. Drylands also affect global climate in several other ways. Their relatively sparse vegetation cover, and hence high reflectivity or 'albedo', is important for the global radiation budget. The large surface area of drylands and their long-term soil storage helps to account for their significant share of the global carbon stock – more than a third according to a recent UNDP-UNCCD-UNEP report – with the potential to sequester more carbon.

Global socio-economic interactions with drylands are equally numerous, ranging from the economic importance of fossil fuels located beneath dryland terrain to drylands as key sources of emigration. Droughts and desertification create economic migrants and environmental refugees who exit drylands. People pressured by environmental degradation may adversely affect political and economic stability locally, regionally and internationally. Drylands are one of the most conflict-prone regions of the world and some of these conflicts attract foreign intervention. These are some of the reasons why drylands cannot simply be ignored.



Map 1
The world's drylands

The 'forgotten billion' dryland inhabitants are among the poorest on the planet…
…the average infant mortality rate (an MDG 4 indicator) in dryland developing countries is at least 23% greater than in non-dryland countries.

DRYLAND POVERTY

The 'forgotten billion' dryland inhabitants are among the poorest on the planet. According to the UNDP Human Development Index, five of the bottom ten positions are occupied by countries with most of their population in drylands (Afghanistan, Burkina Faso, Chad, Mali and Niger), with another three very poor dryland states (Iraq, Somalia and Zimbabwe) unranked due to lack of data.

The Millennium Ecosystem Assessment (MA) found the average infant mortality rate (an MDG 4 indicator) in dryland developing countries was at least 23% greater than in non-dryland countries. This measure of well-being, along with GNP per capita, is compared in seven ecological systems in Asia in Chart 1, clearly showing drylands as the poorest of them all. The MA linked human well-being to the availability of provisioning ecosystem services (food, forage, water etc), suggesting that increasing aridity is associated with increasingly constrained ecosystem services upon which livelihoods may depend. Where desertification reduces these services, human well-being may decline further.

In sub-Saharan Africa, a recent FAO mapping study found particularly high proportions of the rural poor in pastoral and agropastoral drylands, where climate variability and vulnerability to droughts were identified as the main drivers of poverty. Climate-related crop failures, food shortages and livestock weakness are all aggravated by low asset levels in poorer households.

In certain regions, human well-being declines in parallel with the aridity gradient through dryland subtypes, strengthening the proposition that the degree of aridity is associated with the quality of ecosystem services. Map 2, from a UNEP/GRID-Arendal study, illustrates this aridity gradient relationship with adult female literacy (an MDG 2 indicator) in West Africa.

Low development outcomes are not, of course, due exclusively or even primarily to climatically-driven ecosystem services. A host of socio-economic, political and historical drivers are also at work. For example, varying levels of adult female literacy in West Africa may reflect differences in teacher availability, cost of attending schools, gender inequities and socio-cultural beliefs and practices. These effects, and others, will also vary between countries.

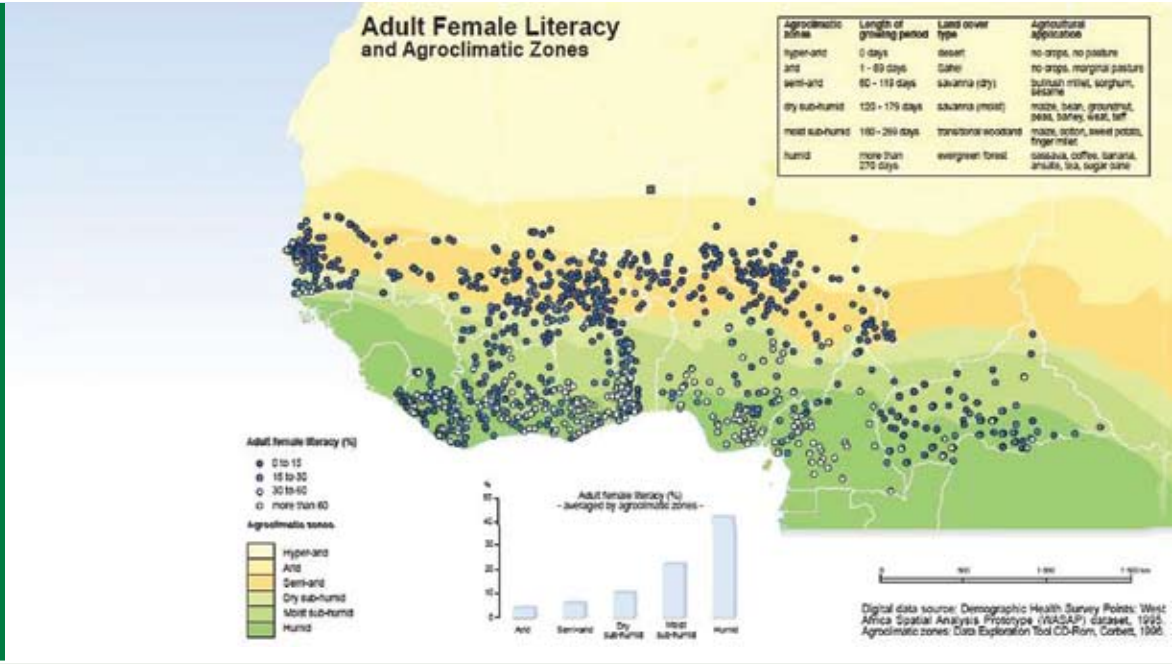
Nevertheless, the pattern in Map 2 is intriguing and undeniable. Furthermore, an essentially similar association between drylands and poverty is repeated at the national level, where regional disparities in MDG indicators occur in dryland parts of numerous countries.

In Kenya, the arid and semi-arid North Eastern province has the country's highest poverty level. The province also lags behind all other parts of the country in terms of rural food poverty (MDG 1), primary education enrollment (MDG 2), several maternal care indicators (MDG 5), and access to safe water sources (MDG 7).

Ghana is another example. It was the first country in sub-Saharan Africa to achieve the MDG 1 target of halving the proportion of its population in extreme poverty, which it did by 2006 well ahead of schedule. However, this national achievement masks a significant regional discrepancy. Extreme poverty declined between 1991 and 2006 in eight of Ghana's ten regions, in some by more than 70%, but in the Upper West and Upper East regions – the country's driest and most remote areas – the proportion of the population in extreme poverty actually increased over this period.

Dramatic regional disparities in human well-being also affect relatively affluent countries. The largest concentration of rural poverty in Latin America is in the dryland northeast of Brazil. In 2006, per capita GDP in the country's richest region (Federal District) was nine times that of its poorest, the northeastern state of Piauí.

With this empirical evidence demonstrating the association between drylands and various dimensions of poverty, the policy implications are clear: these areas need more attention if national MDG targets are to be met and the distribution of development improvements is to be equitable.



Map 2
Adult female literacy declining with increasing levels of aridity in West Africa

WHY SO MANY POOR PEOPLE IN DRYLANDS?

Poverty is by no means solely concentrated in drylands, where a generally low state of human well-being is not inevitable. Examples of great dryland productivity and prosperity emphasise this point, not least in dryland regions of Australia and North America.

Numerous drivers influence the prosperity of an area and its inhabitants; the natural environment represents just one parameter. People may be disadvantaged by age, gender, disability or ethnicity. Spatial disparities in growth and welfare arise for many reasons, particularly market forces associated with economies of scale and the interplay of competing political interests, both frequently persisting over long time periods.

Pockets of rural poverty typically have low rates of ecosystem service provision, but this is just one of many dryland ecological challenges, most stemming from the sporadic availability of water. Many explanations for the low welfare status of rural drylands commonly invoke political disadvantage and economic marginalisation, two traits summed up in one geographical term: perceived remoteness. These political and economic factors combine to produce higher service delivery costs and a general lack of infrastructure, including but not limited to, access to markets and health facilities. Political disadvantage also translates into limited influence in shaping development policies, so prolonging the economic and welfare imbalances drylands face.

Socio-cultural challenges are also pertinent. Mobility is important to numerous dryland communities but rarely well incorporated into policy. Nomadic lifestyles present a particular test for service provision, as does the internal and cross-border migration so widespread among even settled dryland inhabitants. Rapid increases in human population also characterise many dryland regions and automatically magnify MDG challenges, although more people does not inevitably exacerbate development difficulties.

Regions of dryland poverty typically face high levels of risk, which the poor are often badly placed to cope with. This compounds the probability of hardship, making escape from poverty more difficult. High risk levels stem from natural hazards such as disease outbreaks and climatic extremes, with harvest failure and/or livestock mortality common outcomes, but they apply equally to injury and ill-health, deterioration in terms of trade, theft and conflict. In areas afflicted by desertification, these risks are compounded still further.

The fact that certain world drylands are relatively affluent does not undermine the association between the natural environment and human well-being, it simply means that the association is neither inevitable nor permanent. Strategies to reduce risk have been critical to the development of these areas. Many of these strategies have been based on maximising the efficiency of use of sporadic resources, value addition and market access for livelihood security, as well as provision of services such as education and health. Typical elements in success stories include methods for managing risk such as weather insurance, floor price support, and mobile abattoirs for drought offtake of animals, as well as investment in appropriate agricultural research and provision of inputs and infrastructure.