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Authors: von Dach, Susanne Wymann, Ott, Cordula, Klaey, Andreas, and Stillhardt, Brigitta

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Susanne Wymann von Dach
Cordula Ott
Andreas Klaey
Brigitta Stillhardt

Will International Pursuit of the Millennium Development Goals Alleviate Poverty in Mountains?

Since September 2000, when world leaders agreed on time-bound, measurable goals to reduce extreme poverty, hunger, illiteracy, and disease while fostering gender equality and ensuring environmental sustainability, the Millennium Development Goals (MDGs) have increasingly come to dominate the policy objectives of many states and development agencies. The concern has been raised that the tight timeframe and financial restrictions might force governments to invest in the more productive sectors, thus compromising the quality and sustainability of development efforts. In the long term, this may lead to even greater inequality, especially between geographical regions and social strata. Hence people living in marginal areas, for example in remote mountain regions, and minority peoples risk being disadvantaged by this internationally agreed agenda.

Strategies to overcome hunger and poverty in their different dimensions in mountain areas need to focus on strengthening the economy of small-scale farmers, while also fostering the sustainable use of natural resources, taking into consideration their multifunctionality.

The Millennium Development Goals

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria, and other diseases
Goal 7: Ensure environmental sustainability
Goal 8: Develop a global partnership for development

Mountain countries mirrored in MDG indicators

Countries with a high proportion of mountain areas very often face extraordinary challenges in terms of achieving the Millennium Development Goals. Land productivity in mountains is often low due to environmental constraints; ongoing population pressure is leading to environmental degradation; and difficult access to social, economic, and physical infrastructure hampers development and diversification of the local economy. An application of selected MDG indicators to countries where more than 40% of the population lives in mountain areas underlines these assumptions (Figure 1).

In 13 of 21 mountain countries, more people were found to be undernourished than the average for developing countries. In 15 of 24 mountain countries, fewer people in rural areas had access to improved water sources than the average for the developing world. In 9 of 17 mountain countries, fewer women were engaged in wage employment in the nonagricultural sector than the worldwide average for women.

Hunger appears to be one of the foremost concerns. This was confirmed by the findings of a study done by the FAO. In developing and transition countries, about three-quarters of the world's 662 million mountain dwellers live in rural areas and depend mainly on small-scale farming. Half of this number—about 245 million people—were found to be vulnerable to food insecurity, unless they had off-farm income or remittances to buy additional food on the market. Although the figure of 245 million vulnerable people cannot be directly interpreted as the number of undernourished people, it must be assumed that mountain dwellers represent a considerable portion of the estimated 845 million undernourished people worldwide.

Poverty maps reveal poverty traps in mountain regions

All data aggregated at the country level do not, however, provide evidence of the distribution of poverty within a country, nor do they allow for comprehensive understanding of the process of impoverishment. The following questions remain:

- Is the incidence of poverty greater in mountains or in adjacent lowlands?
- What are the driving factors that cause poverty to increase?

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FIGURE 1 Selected MDG indicators in developing and transition countries where more than 40% of the population lives in mountain areas. (Sources: Huddleston et al [2003] for percentage of mountain population; UN Statistics Division, http://unstats.un.org/unsd/mi/mi_series_list.asp for MDG indicators, accessed on 1 November 2005; reference year: 2001, or most recent data of the preceding years).

Country	Mountain population as % of total population	MDG 1 Poverty: Percentage of population below 1$ per day consumption (various years, from 1990 to 2005)	MDG 1 Nutrition: Undernourished persons as percentage of total population (2001)	MDG 2 Education: Enrolment ratio of both sexes, primary level (2001)	MDG 3 Gender equality: Share of women in wage employment in non-agricultural sector (2001)	MDG 4 Children under five mortality rate per 1000 live births (2003)	MDG 7 Environment: Percentage of population with access to improved drinking water in rural areas (2002)	MDG 7 Environment: Ratio of protected area to surface area (2004)
Asia and Pacific								
Bhutan	89	…	…	…	…	85	60	0.26
Papua New Guinea	49	…	…	73	35.4	93	32	0.04
Laos	42	26	22	82.8	…	91	38	0.16
Latin America								
Guatemala	64	16	24	85	38.7	47	92	0.22
Costa Rica	63	2	4	90.6	39.5	10	92	0.23
Bolivia	61	14	21	94.2	36.5	66	68	0.19
El Salvador	60	31	11	88.9	31.1	36	68	0.01
Honduras	60	21	23	87.4	50.5	41	82	0.18
Colombia	54	8	13	86.7	48.8	21	71	0.32
Peru	47	18	13	99.9	37.2	34	66	0.16
Ecuador	43	18	4	99.5	41.1	27	77	0.53
Near East								
Yemen	61	16	36	67.1	6.1	113	68	…
Afghanistan	54	…	…	26.5	…	257	11	0
Sub-Saharan Africa								
Rwanda	75	52	37	84	…	203	69	0.08
Lesotho	73	36	12	84.4	…	110	74	0
Swaziland	62	8	19	76.7	31.3	153	42	0.03
Eritrea	59	…	73	42.4	35	85	54	0.03
Ethiopia	55	23	47	46.2	…	169	11	0.17
Burundi	48	55	68	53.4	…	190	78	0.06
Countries in transition								
Armenia	70	13	34	84.5	47	33	80	0.1
Bosnia-Herzegovina	50	…	8	…	…	17	96	0.01
Kyrgyzstan	46	2	6	90	44.1	68	66	0.04
Macedonia	46	…	…	92.3	42.2	11	…	0.07
Tajikistan	45	7	61	97.2	52.3	95	47	0.18
Georgia	41	3	27	90.7	45.2	45	61	0.04
Average for...		Developing + transition **21.3**	Developing countries **17**	Developing countries **82.6**	World **39.1**	Developing countries **88**	Developing countries **70**	Developing countries **0.126**

Legend
- Major challenge: problematic disparity in relation to average values
- Potential: above-average values
- … Not available

Comprehensive understanding of the process of impoverishment is a precondition for successful, localized strategies to alleviate poverty and achieve the other MDGs. However, the international blueprint for the MDGs fails to provide guidelines for differentiated analysis and procedures. Preparation of the national Poverty Reduction Strategy Papers (PRSPs), initiated by the World Bank, at the end of the 1990s and the beginning of the new century could constitute important spadework leading to more differentiated approaches to the MDGs at the national level. Up to now 55 countries have succeeded in preparing a PRSP, usually based on a more comprehensive poverty analysis. Although poverty mapping projects differ considerably in quality, most have included social and geographical variables, shedding some light on the geographical distribution and multidimensional nature of poverty. Broad-based participation of civil society has provided greater insight into the process of impoverishment and the most urgent needs.

Our review of PRSPs and the underlying poverty maps of several countries offers more disaggregated information on poverty; but these data are frequently disaggregated by political boundaries rather than biophysical delineations. This only allows for an approximate conclusion about the geographical distribution of both poverty and hunger. District- or province-level poverty data often mask the variability within units.

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The following 3 examples were selected from the review of several PRSPs.

- In Bolivia, 87% of farmers can be characterized as smallholders who support 2.7 million of the 2.9 million people living in rural areas. The extreme poverty rate in Bolivia is among the highest in rural municipalities on the high plateau, particularly in the regions of northern Potosí, Chuquisaca, and La Paz. Many indigenous communities live in these regions (Figure 2), which are scattered and difficult to access. National Dialogue 2000, an essential input for the Bolivian Poverty Reduction Strategy Paper, pinpointed the weaknesses in these regions: limited access to basic services, insufficient production infrastructure for small-scale farmers, and low land productivity.
- In Vietnam, poverty rates are highest in the remote, sparsely populated mountainous areas in the Northern part of the country bordering China and Laos, where they reach a level of more than 70%. The national average is about 35%. An in-depth study highlighted the fact that low productivity and lack of market access are among the most important factors explaining the high poverty incidence in these rural areas. But in these areas population density is lowest, thus the absolute number of poor people is higher in areas with low poverty rates, such as cities and the delta region.
- The very detailed poverty map of Kenya shows that poverty can be found anywhere and poverty hot spots are often quite small areas distributed all over the country. At the same time, the maps also show that the Central Province adjacent to Mount Kenya ranks as the least poor province. The mountainous areas of Kenya have more favorable conditions for agriculture production than the semiarid surrounding areas. But these areas are also increasingly under pressure: population growth and environmental degradation are jeopardizing the better-off basis of small-scale farming.

FIGURE 2 In the "Garden of Cañahua varieties" (in Japo, 4100 m), the authorities of the Aymara community conserve the area's rich agrobiodiversity in order to enhance the endogenous potential to overcome endemic poverty. (Photo by Stephan Rist)

Except for Kenya, which represents a favorable mountain production zone in a semiarid area, the above cases point out some similar features of poverty: mountain areas frequently have higher poverty rates than the surrounding lowlands. They are characterized by small-scale agricultural systems dependent on scarcer natural resources than the lowlands. It is difficult for mountain communities to gain access to infrastructure such as roads, and to health care and education. They also lack market access, institutional integration, and political power. Not infrequently, mountain areas are inhabited by marginalized indigenous people.

These conclusions are also reflected in the Sachs Report (Investing in Development: A Practical Plan to Achieve the Millennium Development Goals), which lists "geographical conditions" as a factor that makes poverty traps more likely, and points out that people living in mountainous regions face particularly adverse transport conditions. But overcoming poverty is not as easy as expanding transport infrastructure, as poverty is a multidimensional phenomenon. Land use by small-scale farmers in mountain areas depends on a multitude of potentials and ecosystem limitations, and is influenced by market conditions.

Towards a strategy to enhance food security and ensure environmental sustainability

Leading world experts assume that the MDG to reduce the proportion of people suffering from hunger will only be

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achieved by 2150 at the present pace of progress! Therefore, they are calling on governments to recognize the vital role of agriculture and rural communities in overall economic growth and in sustainable development. This also applies to mountain areas, where attention must first and foremost be given to strengthening the peasant economy, fostering sustainable land management, and ensuring the multiple services of mountain ecosystems in order to enhance food security. This requires institutional and economic changes, not only at the national level but also at the international and local levels.

Differentiate and localize strategies

Our review of PRSPs and MDG reports revealed that—despite the poverty mapping exercises—geographical and social differentiation has become less important in national strategies and even tends to disappear in national MDG reports. Even in countries that have registered overall progress in recent years, it is not uncommon to find that gaps within a country and between social groups have increased. Economic progress has been easier in the more productive sectors and regions, and has not trickled down to more marginal groups or areas. To prevent this from happening again in the future, the different socioeconomic and ecological conditions in remote areas must be more forcefully taken into account in strategies, and differentiated measures must be pursued. This also calls for more comprehensive monitoring in order to foresee development that moves in the wrong direction and adapt strategies accordingly. In some cases even more focused programs will be necessary to tackle the specific challenges of people living in these areas. Vietnam's Socioeconomic Development Program 2006–2010 for Communes Faced with Extreme Difficulties in Ethnic Minority and Mountainous Areas (SEDEMA) is a good example of such efforts.

Recognize the needs of mountain countries at the international level

In general, country PRSP and MDG strategies have a national focus without being incorporated into the wider international economic and policy framework. The

FIGURE 3 A high percentage of households in Chilime Khola, Nepal, are female-headed. This constitutes a sociocultural challenge in the area. Women carry not only an increased workload but often lack any opportunity to break the vicious circle of impoverishment. (Photo by Susanne Wymann)

often one-sided national emphasis on commodity production for economic growth may even put more pressure on small-scale mountain farmers. They are not able to compete with medium- to large-scale farmers in high-potential areas worldwide, unless the institutional framework makes it possible for them to obtain a fair price for their labor-intensive agricultural products. Strategies to revaluate small-scale agriculture require a shift of paradigm in development agendas, both in the North and the South. On the international level, the Doha Development Agenda formulates initial concessions in the right direction. It explicitly recognizes the needs of developing countries to ensure food security and rural development, and grants them special and differential treatment.

Take account of the ecological dimension and acknowledge the value of natural resources

While PRSP and MDG efforts aim to achieve overall economic growth, improved infrastructure and accessibility, and market-oriented agriculture, they most often fail to consider differences in the natural resource base. If agricultural production is increased in order to meet food requirements at the cost of environ-

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mental sustainability, long-term progress will be jeopardized. Food security and alleviation of poverty in mountain livelihoods based on agriculture can only be achieved if the natural resource base is preserved and the services of mountain ecosystems are ensured in the long term.

This also calls for a revaluation of natural resources by society. Recognizing the multiple functions of natural resources, and compensating mountain dwellers for their endeavors to ensure the services of mountain ecosystems by managing the land in a sustainable manner, is a first step. Protected areas already cover a larger area in mountain countries than in other developing countries (see Figure 1). Although area-wide compensation mechanisms might still remain a vision, they can offer a much-needed source of income if set up in a pro-poor way.

Promote institutional and agricultural innovations

Improved farming systems and technology—if adapted for small-scale farmers—contribute to poverty reduction through increased yields and higher incomes. However, mountain farmers have limited access to infrastructure, seed and input markets, and extension services. Informal and formal institutions must be empowered to voice the needs of farmers in national and international policy and decision-making processes, and enable them to take full advantage of technological improvements.

Agricultural research must be fostered in order to develop technological innovations more targeted towards the needs of small-scale farmers with their limited financial means. In this context, special attention must be given to the role of gender in agriculture, and especially to the steadily increasing number of female-headed households (Figure 3). The network of Women Organizing for Change in Agriculture & NRM (WOCAN) advocates efforts in this direction.

Build on multifaceted livelihoods

Traditionally, mountain people are used to building their livelihoods on several pillars and pursuing a multistrategy approach to earn their livelihood. Besides efforts to ensure that labor-intensive land use remains the primary component of the strategy, off-farm income needs to be fostered and safety nets developed. Migration will most probably remain one of the means to reduce pressure on the agricultural system, despite the gender-related social problems it causes. Multifaceted livelihoods will allow for more resilience, reducing vulnerability in a challenging environment. However, limited financial means require a well-planned definition of focal areas where a real potential for economic development exists.

To conclude, we would like to return to our initial questions: Does the MDG process pose a risk to mountains? Not necessarily, if sectoral MDGs become more differentiated, more comprehensive, and correlate with the PRSP processes, and if the environmental dimension is systematically taken into consideration in global and national policies. Nevertheless, to be sustainable development in mountain areas may require specific additional investments, and will therefore depend on global partnerships, as foreseen in MDG 8. In this sense, international consensus on the Millennium Development Goals overall offers development opportunities for poverty-prone communities in mountain areas. But time-bound aspects should not be the primary criterion: more importance must be given to the quality and sustainability of development.

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AUTHORS

Susanne Wymann von Dach, Cordula Ott, Andreas Klaey, Brigitta Stillhardt
Centre for Development and Environment (CDE), Institute of Geography, University of Berne, Steigerhubelstrasse 3, 3008 Berne, Switzerland.
Susanne.Wymann@cde.unibe.ch, Cordula.Ott@cde.unibe.ch, Andreas.Klaey@cde.unibe.ch, Brigitta.Stillhardt@cde.unibe.ch

Susanne Wymann is a geographer who specialises in mountain development and information dissemination within the framework of the InfoResources mandate at CDE.

Cordula Ott is a social anthropologist working at the Centre for Development and Environment. She specializes in socioeconomic change and environmental governance.

Andreas Klaey is Associate Director of the Centre for Development and Environment, he is a forester and specializes in natural resource management and institutional development, as well as learning processes for sustainable development.

Brigitta Stillhardt is a geographer who specializes in sustainable land management, especially in natural resource management and livelihood approaches, within the framework of CDE's outreach section.

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