



## Short Article

# When is Small Too Small? Land Size, Poverty and Agricultural

Rural poverty hits mostly highly populated agricultural countries. The simple ratios of agricultural and arable lands available to total population and agricultural population indicate clearly that the poorest rural Asian populations, who mostly rely on agriculture-based activities for their livelihood, are likely to further sink into misery.

Among the 19 countries in the world whose agricultural population exceeds 20 million people, all but one are developing countries. Ten are Asian countries, six are found in Africa and only two in America. Furthermore the five largest countries are found in Asia.

Asia concentrates 60 per cent of the world's population on slightly more than 20 per cent of the world's land area, thus available arable land is a major constraint. Farmers in Asian countries have access to arable lands that are 100 times smaller than lands in developed countries. With the exception of Thailand (0.5 ha) the amount of available arable land per farmer does not exceed 0.3 hectares in all the selected Asian countries, and not even 0.2 hectares in six countries.

A 2010 projection shows that the arable land ratio per farmer is not going to significantly change for Asian countries, while it is likely to further increase in developed countries, mainly due to decreases in the agricultural population. The gap in arable land availability between the most developed countries and countries with the most numerous and poorest agricultural populations is widening.

However, this data does not fully reflect the real conditions of the poor farmers. It assumes that land access is evenly distributed among agricultural households, however this is just not true. In Nepal, 44 per cent of the agricultural households operate 14 per cent of the total agricultural land area, while the top 5 per cent occupy 27 per cent. The concentration index for agricultural land is 0.54 reflecting a highly uneven distribution of farm land (Sharma, 2000). In Bangladesh, a holding size distribution from the 1996-1997 census shows that small farms increased in number by up to 83 per cent and operated 23 per cent of farmland, against respectively 75 per cent and 15 per cent in 1984 (Absan and Ahmed, 2000). In India, there are more than 105 million agricultural laborers today compared to barely 27 million in

1951. Within fifty years, the ratio of agricultural laborers to cultivators increased from 2/5 to 4/5. (Department of Agriculture and Cooperation, 2004).

Literature often mentions an inverse correlation between land size and productivity (Maxwell and Wiebe, 1998; Banerjee, 1999), arguing that smaller farms make a more rational and efficient use of resources and face fewer costs such as transaction costs. If this is true, would then the observed trend mean that Asian countries' agriculture will be more competitive thanks to this shrinking land ratio?

A regression conducted for 18 of the above-mentioned countries (no data available for Myanmar) between the agricultural value added per agricultural worker over the 1998-2000 period (World Bank, 2003) and the arable land ratio per farmer for the year 2000 shows, with a 0.83 R<sup>2</sup> at the 95 per cent significance level and a t-test value of 8.7, the opposite situation. This means that the arable land ratio explains most of the observed variation in agricultural productivity in the selected countries. As the size of arable land further shrinks, productivity gains that were highlighted by various authors disappear. Several reasons may explain this fact. As small land area is associated with poor households, it is likely that farmers cannot afford to buy the inputs needed to increase production; they have also to engage in other activities as labourers and cannot give sufficient attention to the care of their plots. Another possibility is the overexploitation of resources over time such as land and water leading to degraded soils and lack of irrigation facilities in the most fragile areas. Actually, the same regression run for 1988-1990 data shows a somehow weaker, yet still high, R<sup>2</sup> (0.7) confirming this temporal trend.

The key question today is: How small is too small? When the number of landless households or micro households that cannot provide livelihoods for the family members increases, rural poverty increases and productivity decreases. It also draws attention to the size factor in land redistribution policies as these are commonly advocated as useful means to increase productivity ■

Written by Dr. Robin Bourgeois, ISDB Programme Leader, UNESCAP-CAPSA, Bogor, Indonesia.

Flash **BREAKING**

## Food Insecurity in Mountain Regions

Covering 22 per cent of the world's land surface and 12 per cent of the world's population, or 720 million people, some 271 million mountain people, mostly rural, are vulnerable to food insecurity and, of these, around 135 million are chronically hungry. High levels of malnutrition and hunger in mountain areas have much to do with the inaccessibility, complexity and fragility of mountain environments, and the extent to which mountain people are often marginalized.

Antonios, P., 2004. The Challenge of Sustainable Mountain Development, FAO Newsroom (28 April 2004).

## Progressive Policies to Reduce Poverty in Asia and the Pacific

The poverty eradication challenge is especially daunting in the Asia-Pacific region, home to about 693 million of the estimated 1.1 billion people who exist on less than \$1 per day. Under the current conditions of a global recession, progress against poverty in the Asia-Pacific region is likely to slow unless public policies are concentrated on aggressively combating it. Poverty reduction is feasible with slower rates of growth but it will depend on implementing more equity-sensitive public policies. The right combination of such policies can, in fact, be a broad-based stimulus to growth.

UNDP, 2004. UNDP's Asia Pacific Programme on the Macroeconomics of Poverty Reduction, (30 March 2004).

## Informal Sector: Neglected but Important

UNESCAP estimates that the informal sector accounts for between 14 to 30 per cent of the GDP in Asia-Pacific countries, however it is currently not being included. Workers in the informal sector include mobile stallholders and street-sellers, as well as employees in illegal businesses, like those involved in the manufacturing of pirated products. An inaccurate GDP estimate can result in misguided government policies, particularly in the area of poverty reduction.

UNESCAP, 2004. Informal Sector Accounts for 14 to 30 per cent GDP in Region, Press Release No: G/14/2004 (10 May 2004).

## Some Facts about Poverty

Half the world or nearly three billion people live on less than two dollars a day. Moreover, the Gross Domestic Product of the poorest 48 nations (i.e. a quarter of the world's countries) is less than the wealth of the world's richest three nations combined. Nearly a billion people entered the 21st century unable to read a book or sign their name. The poorer the country, the more likely it is that debt repayments are being extracted directly from people who neither contracted the loans nor received any of the money.

Shah, A., 2004. Poverty Facts and Stats

<http://www.globalissues.org/TradeRelated/Facts.asp>, Wednesday (28 April 2004).

## Reducing Poverty and Unemployment in South Asia

Donor-driven economic reforms may have spurred growth in the seven south Asian nations that host 22 per cent of the world's population, but they failed to cut poverty levels and increase employment. An average 23.9 per cent of the urban population and 31.6 per cent of those in South Asia's rural areas remained below the poverty line during 1995-2000. The average per capita Gross National Product in South Asia was US\$ 448 in 2001 against an average of \$ 1,160 in developing countries. Growth in South Asia has often been accompanied by greater use of labor-displacing technology. Moreover, the education system has failed to prepare workers for the competitive global job market. In addition, there is a large disparity between the educational attainments of female and male students. The average adult literacy rate in the region stands at 55 per cent against a developing countries' average of 75 per cent. The female literacy rate is only 43 per cent against a 65 per cent average for developing countries. Gender inequity, reduction of public expenditure and a lack of effective skill development programs are also blamed for the shortfall in employment opportunities across South Asia. Thus, the need to link growth with human development, advocating for employment-intensive growth, reduction of gender gaps in education, protection of workers' rights and equitable trade policies are some policy options to reduce poverty and unemployment in the region ■

Based on Khan, Sharier, 2004. Poverty, Unemployment Stunts South Asia's Growth Graph, One World South Asia, <http://www.Southasia.oneworld.net/article/view/82908/1/>

## Cassava Market in India: Promising

In India, cassava has attained the status of 'commercial' crop generating higher net income. Industrially, cassava is finding diverse uses to produce many value added products, such as, starch, sago, wafers, chips and flour. Among the many value added products, demand for cassava starch (both native and modified) is derived demand from a wide range of industries viz., the textile industry, corrugation box industry, paper conversion industry and to produce adhesives as well as the food industry to produce sago and wafers. Projected cassava starch demand in the textile, corrugation box and paper industry were projected to be 87,000, 300,000 and 200,000 tons respectively by 2020 in India. Encouraging demand for cassava chips and flour exists in animal feed, textile and adhesive industries. More than half of the cassava starch produced is being used in India for the production of sago and this demand is growing continuously. This whopping industrial demand for cassava can only be met through increased cassava production. Modern biotechnological tools like tissue culture and genetic engineering can be handy for producing high starch content, high yielding cassava varieties so as to meet the projected demand in future ■

Based on Srinivas, T., 2004. Demand Assessment for Cassava in the Industrial Sector of India, Paper presented at the Six International Scientific Meeting of the Cassava Biotechnology Network (CBN-VI), CIAT, Cali, Colombia (8-14 March 2004).

## Bioenergy for Poverty Alleviation and Sustainable Development

While holding great promise for developing countries, bioenergy is often neglected by policy-makers. Bioenergy includes fuel wood and charcoal, energy crops such as sugar cane, sweet sorghum and rapeseed and agricultural and forestry residues, to produce heat, ethanol, biodiesel, bioelectricity or biogas. Currently, energy from biomass accounts for 15 per cent of energy consumed worldwide and up to 90 per cent in some developing countries.

The production and use of bioenergy also contributes to poverty alleviation and food security. Bioenergy in general and wood energy in particular are the dominant sources of energy for about half of the world's population, often the poorest of the poor who use this energy mainly for cooking. The poor have very little access to other energy sources such as electricity or fuel, which would allow them to generate income and improve their living conditions. Bioenergy can reduce land degradation and help mitigate climate change. Sustainable bioenergy systems should be promoted to prevent forest degradation or deforestation, deterioration of watersheds, and loss of soil fertility and biodiversity.

International bioenergy trading is becoming a reality; wood, wood chips, ethanol, biodiesel and bioelectricity are being transported across borders. It needs to be ensured that the farmers do not miss the benefits of this trade ■

*Based on Northoff, E., 2004. The Potential of Bioenergy is still too Often Neglected, FAO Press Release (2 June 2004).*

## Food Deficit in 2005

Closing the gap in the world grain harvest this year following four consecutive grain harvest shortfalls, each larger than the one before, will not be easy. The grain shortfall of 105 million tons in 2003 is easily the largest on record, amounting to 5 per cent of annual world consumption of 1,930 million tons. The four harvest shortfalls have dropped world carryover stocks of grain to the lowest level in 30 years, amounting to only 59 days of consumption. If the estimated 2004 shortfall of 60 million tons materializes, it will take the world into uncharted territory. Either grain stocks will drop by 12 days of consumption, falling to an all-time low of 47 days, or food prices will rise and force a reduction in consumption something that will be particularly difficult for the 3 billion people who live on less than \$ 2 a day. In reality, the shortfall will be covered by a combination of declining stocks and rising prices. Wheat and corn prices are at 7-year highs. A shortfall on the scale projected almost guarantees the emergence of politics of food scarcity in 2005. There are already early signs of this. For example, in mid-2003, the European Union stopped issuing grain export certificates for several months and in January 2004, Russia imposed an export tax on wheat to combat rising bread prices ■

*Based on Brown, L., 2004. World Food Security Deteriorating: Food Crunch in 2005 Now Likely,; <http://www.peopleandplanet.net/doc.php?id=2209>*

## Flash EVENTS



### The Commons in an Age of Global Transition: Challenges, Risk and Opportunities

10<sup>th</sup> Biennial Conference IASCP  
9 - 13 August, 2004  
Oaxaca, Mexico.

Contact :  
<http://www.iascp2004.org.mx/>

### The 4<sup>th</sup> International Technical and Commercial Potato Exhibition

1 - 2 September, 2004  
Villers Saint Christophe Aisne, France.

Contact :  
François-Xavier BROUTIN  
Phone : + 33 (0)1 64 99 22 23  
Fax : + 33 (0)1 64 99 23 29  
Email: [fx.broutin@arvalisinstitutduvegetal.fr](mailto:fx.broutin@arvalisinstitutduvegetal.fr)

### Vertical Markets and Cooperative Hierarchies: The Role of Cooperatives in the International Agri-Food Industry

3 - 7 September, 2004  
Chania, Crete, Greece

Contact :  
<http://www.esf.org/euresco/04/sc0417>

### Agricultural Development and Rural Poverty under Globalization: Asymmetric Processes and Differentiated Outcomes

8 - 11 September, 2004  
Florence, Italy

Contact :  
<http://www.eaae.org/activities/indexa.htm>



**UNESCAP-CAPSA**

Jl. Merdeka 145

Bogor 16111, INDONESIA

Phone : (62-251) 356813, 343277

Fax : (62-251) 336290

Email : capsa@uncapsa.org

 www.uncapsa.org

**EDITORIAL COMMITTEE** Nobuyoshi Maeno

Erna M. Lokollo

Robin Bourgeois

Tomohide Sugino

Wayan Reda Susila

**EDITOR** Matt Burrows

**PRODUCTION** Agustina Mardiyanti

**DISTRIBUTION** Fetty Prihastini

**PRINTER** SMK Grafika Desa Putra

**LAYOUT DESIGN** Fransisca A. Wijaya

# Flash EDITORIAL CONTACTS

## Book Review

### The Strategy of National Poverty Eradication

Poverty Reduction Strategic Paper, TPK3KPK Coordinating Ministry of Public Welfare, Jakarta, 2004

Though poverty has been a chronic problem in Indonesia since even long before Clifford Geertz advanced his famous concept of shared poverty, the authors view its presence in Indonesia as ironic. Accepting this irony as a fact makes it sensible to view the existing poverty as structural poverty. Due to its complex nature, structural poverty must be a type of problem that cannot be fixed by any simple measure over a short period of time. This is the reason why structural poverty often looks quite immune to poverty alleviation efforts.

However, the authors do not accept this immunity argument as the explaining factor behind the current low rate of poverty alleviation in Indonesia. Instead, the authors claim the low effectiveness of poverty alleviation policy intervention can be improved significantly in the near future if the current problem of policy coordination is solved. Policies have been, in the past designed and implemented by many bureaucratic institutions which worked individually. As they continue to work individually in handling the same problem, the prospect of conflict between policies designed and implemented by different institutions becomes so high as to retard the effectiveness of the poverty alleviation policy.

Despite their obsession to solve the existing policy conflict, the authors surprisingly offer no integrated strategy for poverty alleviation. Instead, the authors simply identify a set of four elements that they argue can be used as the basis of strategy for poverty alleviation (chapter 4). However, the authors provide no clues as to how this set of strategic elements can facilitate solid coordination between the involved government institutions. This problem is apparently the reason why the proposed policies for poverty alleviation described in the subsequent chapter (chapter 5) not only have no clear connection with this suggested basis of strategy (chapter 4), but also are not so sound.

It is hard not to agree with the authors about the role of policy coordination problems in retarding the effectiveness of poverty alleviation policy intervention in Indonesia. Solving this problem we would first have to investigate to obtain a clear understanding about the nature of this problem. The authors do investigate this (chapters 2 and 3), but their investigation is neither focused nor systematic. This unsystematic investigation has, in fact, overlooked the important role that corruption plays in the present problem of

policy coordination. Corruption has deeply penetrated poverty alleviation programs in Indonesia. The case of corruption in the subsidized rice-for-poor program (*raskin* program) is only one example of many other similar cases of corruption that have become public knowledge. This corruption is the crucial factor behind the current policy coordination problem. It is much easier for policy makers to corrupt if they individually have a lot of discretionary power in designing and implementing poverty alleviation policies.

This implies that the current policy coordination problem cannot be solved without tackling the issue of corruption involved in poverty alleviation policy intervention. This is, however, a very complex task. Corruption in Indonesia has been like a deadly cancer for which there has been no, as yet, effective medicine available. If corruption appears incurable, it does not mean that the poverty is not eradicable. It is eradicable, but it cannot be eradicated by the present diverse policy since it is heavily tainted with corruption. The government has to make a radical changes in its policy intervention strategy.

This means policy makers should take into account the real situation of the poor who mostly live in rural areas and rely heavily on secondary crops not only for income, but for energy and vitamins when designing and implementing policy aiming at improving their welfare. Hence, the policy should include provision of infrastructure, development of suitable varieties, credit schemes and price support, and the promotion of industries using secondary products as basic inputs, as well as people empowerment. Past experience where the tendency of governmental farm support has been mostly captured by the rich-commercial farmers through the use of political-economic power has to be anticipated in policy design and its implementation in order to ensure that the newly proposed poverty alleviation policies really reach the targeted group ■

*Reviewed by* Parulian Hutagaol, Associate Project Leader, AGRIDIV Project, UNESCAP-CAPSA, Bogor, Indonesia.