



Product Certification: Creating Added Value for the Rural Poor?

*Togar Alam Napitupulu**

Introduction

Global trade has significantly changed the markets of domestic agricultural products during the last decade. Consumers are increasingly demanding high quality and safe products. The first P of the 4P's marketing strategy traditionally practiced for non-agro products has now become a major marketing tool for agricultural products too. Product differentiation based on what consumers want as opposed to a homogenous commodity is increasingly emerging; of course - one would expect - with price premiums.

In line with the new wave in world trade and changes in consumer demand for food and agricultural products, we are now witnessing fast growing, multi-national and national retail store chains in major cities in developing countries. Their presence expands the market for high-quality fresh and processed food, of which some is supplied from other countries, but a lot of which is also supplied locally by farmers and farmer co-operatives; provided that they meet the quality standards and supply stability required by the store.

Following the growth of multi-national retail stores we are also observing growth in domestic retail store chains that invade not only big cities and capitals but are also established in district level towns. Similar to the multi-national retail stores, these local stores also usually require a particular level of quality agro-products, different from those that are sold in traditional 'wet' markets.

This phenomenon is perpetuated by more foreign direct investment, and will continue to grow in the future providing opportunities for local producers and processors, which would otherwise be captured by imports. The question is; how can local farmers seize the opportunity? Is there any recipe that can be adopted to be able to supply this growing demand? In the end, will the rural poor benefit? If not, how can they become part of this new market development and consequently reap the benefits?

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Evolution in marketing and logistics

All products, processed or fresh, are undergoing some value-added activities or transformations where value is added along the chain from production to consumer. In general, these transformations are performed by many decoupled companies along the chain. Traditionally, co-ordination among companies in the various nodes along the channel is assumed to happen through the various market mechanisms and arbitrage. Marketing chains have been an object of study by many researchers to look at marketing efficiency, namely, with questions such as: has the allocation of resources at various nodes in the chain been optimal, or has the contribution to value added by each agent in the chain been paid (marketing margin) equal to its marginal value of productivity. It is good to understand marketing efficiency because its exposition contributes to the improvement of the whole marketing system and provides information for business, identifying business opportunities, and more rarely for policymakers in devising policies to improve food safety in the various steps of the marketing system.

Actual improvements in the marketing system are made by all players themselves, each in the process of pursuing their best interest. In the old days, there were some companies who performed all the processes along the chain and managed them centrally in a vertically integrated fashion. One classic example is when Ford Motor owned much of what it needed to supply its car factory. It owned and operated iron mines that extract iron ore, steel mills that turned the ore into steel products, plants that made components or car parts, and assembly plants that turned out finished cars. However, with the rapid change in consumer behaviour demanding quick variety in products, the one-size-fits-all operation could not be responsive enough to handle the non-homogenous products in demand. When Henry Ford was once asked about the number of different colours a customer could request, he said, "they can have any color they want as long as it's black". But today consumers want green apples and red pears, yellow and purple mangoes. In agribusiness, the classic example is the dairy industry, starting with a perishable product and marketing it through a network of small shops and door-to-door retail agents.

Improving efficiency and responsiveness has been widely pursued for non-agricultural products in the last decade with the concept of Supply Chain Management (SCM). Usually, the whole system from supplier to consumers including service providers such as logistics; finance; market research; product design; and information technology; can only be managed by one company, which refers to the meaning of management itself. The concept seems to presuppose vertical integration as in the case of Ford Motor mentioned above. However, such an arrangement could only be suited to a situation twenty years or more ago. What then is the current reality?

During the last decade, what has evolved is that under SCM, the whole marketing system is managed by one virtual management system called 'virtual integration', where each company involved in the supply chain is maximizing efficiency and responsiveness in close co-ordination with other companies. Each company focuses on its core competencies and partnerships with other companies that have complementary capabilities for the best mix of response and efficiency in delivering the products and services for the market being served. This is thanks to information technology, the main enabler of co-ordination between the multitude of companies to 'multi manage' their chains.

For agricultural products, both processed and fresh, co-ordination of all the parties involved in the chain is quite different from those of non-agricultural products. There are some companies that could easily be 'managed virtually' along the marketing channel. However, some are relatively difficult to co-ordinate with respect to enablers, IT as well as behavioural and technological enablers. For instance, all agricultural products at some stage have to use supplies of raw materials by farmers. By nature, raw materials are supplied by many small-scale farmers to obtain economies of scale at the next level and the volume required by the retailer, frequently as integrator (Reardon, 2005), at the end of the chain to supply the market. Even if they are behaviourally ready to join the supply chain, often they might not be ready to implement other enablers of SCM such as the adoption of IT and technology as this requires substantial investment. The exception is for the large, business oriented farmers with sufficient economies of scale.

Message from the Director

At the recent national conference on poverty in Indonesia a large volume of facts and findings on poverty was presented to the public.

It is the first time that such a broad and multi-sided study was conducted on poverty in Indonesia. The importance of the major findings transcends the boundaries of the archipelago.

To my mind the most important elements of the study were the analysis of long-term policy impacts on poverty by Prof. Peter Timmer and the assessment of the investment climate at the district level.

The findings of the study are very clear. In the New Order years of 1975-1987, the general policy of the government was definitely pro-poor, while the period of democratization and recovery post crisis have not been pro-poor. One of the major policy elements in the New Order years was the food policy in conjunction with the green revolution. Stable rice prices, rising productivity, massive local investment in irrigation, roads and fertilizer distribution resulted in a period of rural based development for two decades. The current situation in Indonesia stands in strong contrast to previous decades. Movement out of poverty is associated with migration; local, national as well as

international. The report also indicates that the gap in investment in rural roads, services and education has led to stagnant local economies, while the proliferation of local rules and by-laws has not really improved the local, rural investment climate. Current food policies only benefit rice producers because the Government of Indonesia has reduced rice imports substantially leading to high seasonal price fluctuations, and in general, soaring rice prices. Because rice is the main consumer good of the poor, (they spend some 20 per cent of their earnings on rice), high rice prices effectively reduce the spending capacity of low-income people. Almost 50 per cent of people in Indonesia earn less than US\$ 2 per day.

These facts are really quite chilling. It is really a major achievement of the Indonesian/World Bank team of researchers to produce a very strong basis of information for the Government of Indonesia to act upon. It is most important that the core messages do not stay in the capital city; they should be shared and internalized at all levels in the country.

The overarching message has relevance to all developing countries in Asia; namely the need for stable and long-term policy, focused in urban and rural areas alike, and seeking to improve the distribution of income.

Taco Bottema

Product certification as an enabler

The decisions made by each company can be grouped into five major components called the drivers of SCM, more specifically production, inventory, location, transportation and information. One way to understand these operations is by using a supply chain operation research model (SCOR) developed by the Supply-Chain Council (www.supply-chain.org), which is organized around the following categories of discussion: plan, source, make and deliver.

Plan, refers to all the operations needed to plan and organize the operations in the other three

categories. These include demand forecasting, product pricing and inventory management. Source operations include the activities necessary to acquire inputs to create products or services such as procurement of materials, as well as credits and collections (acquisitions of cash). Make activities include the operations required to develop and build the products and services, such as product design; production scheduling; and facility management. Deliver encompasses activities that are part of receiving customer orders and delivering products to customers. This last operation component constitutes the core connections between companies in a supply chain.

The five areas of improvements or drivers are coherently united within each operation activity by the Total Quality Management (TQM) concept. Broadly speaking TQM is both a philosophy of “managing the entire organization so that it excels in all dimensions of products and services that are important to the consumer” (Chase *et al.*, 1995) and the application of generic technological tools such as Statistical Process Control. In other words, TQM can be thought of as a process of ensuring the creation of quality or excellence for the consumer, which in the end requires some kind of certification: product (work) in process certification. In operation jargon, consumer is defined in the context of *next consumer* philosophy, meaning that all steps along the process or chain are consumers, i.e., consumers of the previous process.

Products can be certified at three stages of the operations. First, certification or assurance at the end of the process, namely finished product certification, the process which is called inspecting quality into the product. Second, certification or assurance in the process of making the products, or building quality into the product. And third, in the design stage of the product, i.e., thinking quality into the product.

For agricultural products a significant portion of the competitive edge stems from sourcing, in particular in determining the supplier of the produce. As quality and continuous supply are the most important factors in the agro-food industry, they are also the most important consideration in sourcing activities. In the context of product certification, by the nature of agricultural products themselves, it is important in the sourcing activity to make sure that what comes out of the farm complies with the retailers (representing the consumer) requirements. This can be done at the three stages of operations mentioned earlier, at the end of the process, i.e., grading and sorting; during the making of the products; handling, storing and cultivation stage; and at the design stage; deciding on the type of seed to grow and the selection of the technology on how to grow.

Unlike manufacturing, for agricultural products retailers are sourcing for (pre) finished products, hence, the making of the biological product itself, the actual cultivation of the produce, is in the farmers hands beyond the retailers control. Of vast importance is the fact that many chains deal with perishable produce, which imposes its own

very stringent logic to subsequent steps. What is commonly practiced today in industrialized countries is to have the farming practice audited and certified by a third party. In fact third-party certification applies to all stages of operations in general.

Similarly, unlike manufacturing products and services, for agricultural products much of the specification on quality is determined by retailers who base their quality requirements on consumer requirements and some compliance to government regulations. We observe for instance the requirements set by EUREGAP in order to accommodate both requirements. The trends seem to be moving towards imposing individual requirements by retailers, which is at the same time being used as a competitive weapon against its competitors.

Close observation then on the sourcing activity in the agro-food industry boils down to product certification, a practical mechanism to ensure that what the consumer wants is what they get. What the consumers want may be the same as what the producers claim. In such a case, a mechanism is still required to make sure that the produce is exactly as is claimed. In this assurance process trust is involved. If the consumers trust no one, they will do all the checking on the product to ensure that it complies with the requirements set (possibly mentally) by the consumer, or check that it is as claimed by the producer, or have a third party do the job.

In manufacturing operations, it is common to have a ‘single supplier’ philosophy instead of the traditional low cost approach through a bidding mechanism by many suppliers. It is not uncommon for a vendor to take some years until they are qualified to be a vendor for the company. In fact once they are accepted as supplier, they become part of the extended ‘family’ of the company. There are some advantages to this method, that is, not only in ensuring delivery of high quality products, but also suppliers can contribute to efficient, timely and effective product development and process selection. Edward Deming (quality guru), once said in his 14 points for quality improvement management, to avoid procurement based on price alone, but consider total cost and eliminate suppliers whose quality is not acceptable (Martinich, 1997): a single supplier philosophy.

How the rural poor can benefit

The above discussion tells us that the new wave in the agro-food industry, international sourcing of agro-food produce by multi-national supermarkets, and supply chain management in produce procurements are the result of increased and stringent competitiveness in the market (both global and local) that lead to an effort by players to improve efficiency and responsiveness in all aspects of operations. Any possible improvement in any aspect at any level should not be left unnoticed and should be taken advantage of if the business is to survive and grow in the highly competitive market we are facing today. This implies that any entities participating in the supply chain are required to do the same in trying to fulfil the demand of the market.

This also implies that rural farmers, poor or well off, have to align themselves in this effort of improving efficiency and responsiveness in all aspects of business. The rewards are substantial, but effort is required. Besides the usual economies of scale and substantial amount of investment required, behavioural change is also required, that is, all parties should strive towards an aligned virtual corporate culture.

The question is how the rural poor farmers could be involved and benefit from this wave? Certainly they are not an exception. They too have to align themselves or they will be left out. Such alignment is often beyond the reach of poor farmers which explains why in many developing countries they rarely take part in the process of globalization and the growing trend of supermarkets. Step-by-step product certification in the sense of total quality management and single supplier philosophy could be part of the solution. Rural poor farmers should be part of the whole system that is, become "extended business units" of the retailer, by providing them the technology, the culture and the economic ability to support themselves. In addition, technology can be derived from certification standards. Simple tools for grading, sorting and packaging could help improve their chance of inclusion in the emerging market of high quality produce.

Experiences from Thailand and India (Burma, *et al.*, Van de Kop, *et al.*) indicate that this is not impossible. What I would suggest is to first try to capture domestic demand for high quality produce

from the supermarkets. In the case of Indonesia there are some farmer associations organized by traders who are able to supply local supermarkets, hotels and restaurants with high quality vegetables. For export markets, a farmers association is connected by the government as third party to an importer and distributor of high quality vegetables in Singapore where technology, financing and the market are provided by the importer.

Concluding remarks

Growth in the multi-national stores, franchised domestic retail store chains as well as hotels and restaurants demanding specific, high quality fresh and processed food, is a new phenomenon in developing countries that should be tapped into by farmers. As this new development is the result of a more competitive open global economy, all participating players from farm to table are required to exercise stringent practices on all aspects of operations from planning to delivery with utmost discipline. This makes it more difficult for rural poor farmers to take part and benefit.

Product certification in broader terms, in particular in the spirit of 'single supplier' philosophy, where the farmers are provided with technology, financing and the necessary culture and management by retailers as co-ordinating company, is an alternative solution enabling poor farmers to become partakers in the new wave of market. Instead of directly entering the global market, one could begin with the newly emerging local/domestic supermarkets with less stringent requirements.

It should be noted that this is not an easy undertaking as most poor farmers lack the resources, ability, economies of scale and to a certain extent the culture necessary for success in this undertaking. We believe the role of facilitating could be done by public-private partnerships. In addition, the government can contribute to this success by providing the necessary public goods such as modes of transportation, communications etc. that minimize transaction costs. ■

Powering Rural Poverty Alleviation with Renewable Energy*

Robin Bourgeois**

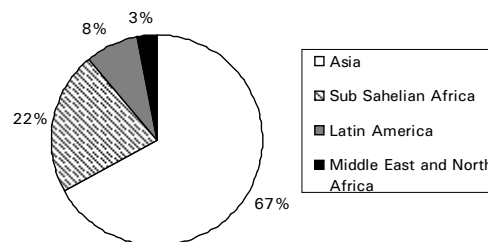
The growing consensus that "...energy is central to reducing poverty and hunger..." needs to be urgently turned into operational, effective measures and actions that can achieve visible improvements in the well-being of the Poor¹. Because devising strategies and providing support to improve the poor's access to energy must be carefully thought out taking into consideration the specific characteristics of the target population and their environment, this paper advocates a reorientation of energy and development policies so that poverty alleviation objectives become a core issue at a time where growing concern for sustainable development entices policymakers and scientists to focus on clean, renewable energies (CRE).

The rationale for linking the promotion of CRE with poverty alleviation stems from the fact that most of the Poor in Asia and the Pacific still live in rural areas and are almost totally deprived of energy services, while at the same time locally generated CRE poses a cheaper option in terms of public investment with huge multiplier effects. This paper first presents an overview of rural poverty and its characteristics; then paints a picture of the potential and rationale for promoting CRE as way out of poverty. Three core issues to make energy policies in Asia and the Pacific more pro-poor are suggested. In conclusion, implications for financing poverty alleviation through renewable energy development are presented.

Poverty in Asia and the Pacific

The largest portion of poor people on earth is located in rural Asia and the Pacific². Of nine-hundred million rural poor people who struggle daily to secure a tiny amount of the energy other people and other countries recklessly waste, more than 60 per cent live in Asia (see Figure 1).

Figure 1. Distribution of rural poor population by regions



Source: Adapted from IFAD Rural Poverty Report, 2001.

Most of the poorest rural Asian populations are women, landless people, very small-scale farmers, ethnic minorities and displaced peoples. They are characterized by a lack of land, capital and information. Their life expectancy is shorter than national averages, child mortality is higher and the education level is lower. Hygiene and health are poor; they do not have regular access to clean water (Figure 2).

In addition, the rural poor are confronted by much larger challenges in their living environment. Remoteness is a common characteristic of the situation of rural poor people such as in north-western China or east-central India. This is often combined with unfavourable geographic and climatic conditions such as altitude, aridity and sloping land where agricultural potential is limited. Around 375 million people live from the scarce products of dry land cultivation. A collateral feature of remoteness is lack of infrastructure, especially transportation and communication.

Harsh climate and geography make the cost of building and maintaining infrastructure by central

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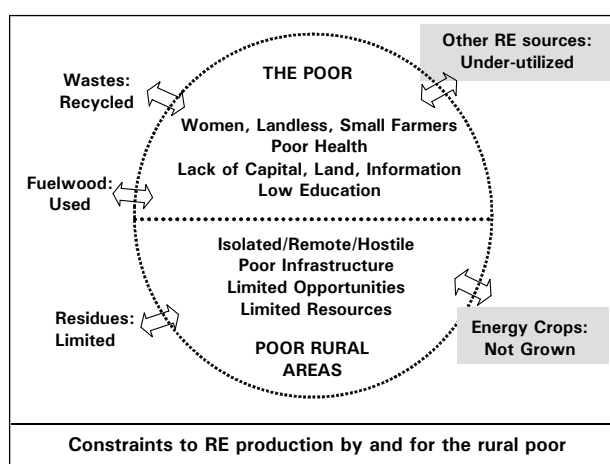
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¹ www.itdg.org/docs/advocacy/itdg-greenpeace-study.pdf. Greenpeace-ITDG: Sustainable Energy for Poverty Reduction: an Action Plan, 2004-3.

² See, for instance, UN Millennium Project 2005. Investing in Development: A Practical Plan to Achieve the Millennium Development Goals. Overview, page 9.

governments prohibitive compared to the economic benefits that they may bring. Lack of infrastructure further combines with remoteness to deflect development priorities and investment from the needs of the rural poor in marginal areas. They are forgotten by the policymakers and the institutions in charge of providing basic public services. Remoteness, geographic and climatic difficulties, lack of infrastructure, and investment deprivation make opportunities for successful private enterprise very limited and more prone to failure (Figure 2).

Figure 2. Salient characteristics of rural poor populations and the constraints they face



As a result rural poor populations usually rely on local resources they gather from their immediate environment, a practice that is considered damaging to health and to the environment³. The World Energy Council argues, for instance, that the use of traditional energy sources by the Poor (mainly combustible wood fuels) combined with inefficient technologies and appliances results in the wastage of wood resources. In addition, the use of crop residues and animal waste as fuels can be to the detriment of soil quality and agricultural as well as livestock productivity, as these resources often have alternative applications as soil conditioners, organic fertilizer and livestock fodder.

Furthermore, the significant time spent by women and children in collecting and using traditional fuels could be spent on more productive tasks or education⁴. Finally, the adverse health effects of the smoke from burning traditional fuels in inefficient appliances are significant, especially among women and children. A Greenpeace-ITDG report states that more than 2 million children and women die every year from the domestic pollution of cooking fires⁵.

In this cycle, poverty leads to environmental degradation which, in turn, further leads to poverty. Where and how do we start to break this cycle becomes the key question.

Multiplier effects of local renewable energy generation on rural poverty

One may argue that to some extent shifting from traditional burning of biomass to commercial hydrocarbons would reduce, rather than increase, local ecological impacts and therefore they advocate for not systematically seeking to avoid fossil fuel. Since what really matters is poor people's access to better cooking fuels, electrical power and fuels for productive activities and transportation needs, it is claimed that the use of fossil fuel would not materially affect the greenhouse gas balance of the world, but could make a huge difference to the quality of life and economic prospects of poor populations. Thus, further development of the electricity grid to reach areas and households hitherto unconnected is presented as an option. However, due to the specific characteristics of poor households in rural areas and their environment, such an option should be carefully weighted against other alternatives.

Indeed, growing concern for more sustainable development, where meeting the needs of today's generation would not pre-empt meeting the needs of later generations have focused attention on the potential role of renewable energy. This issue is of particular strategic dimension on two different scales.

Firstly, at the macroeconomic level, in less developed countries and regions, usually

³ <http://www.earthinstitute.columbia.edu/sop2004/consensus.html>. The Earth Institute. State of the Planet, 2004.

⁴ http://www.worldenergy.org/wec-geis/publications/reports/rural/rural_development_and_energy/1_2.asp. World Energy Council. The Challenge of Rural Energy Poverty in Developing Countries.

⁵ www.itdg.org/docs/advocacy/itdg-greenpeace-study.pdf. Greenpeace-ITDG: Sustainable Energy for Poverty Reduction: an Action Plan.

landlocked, in Asia and the Pacific, the cost of importing fossil fuel based energy is placing an increasing burden on general growth and development, which the recent soaring oil prices in international markets have brought under the spotlight. In Indonesia, domestic fuel price hikes in 2005 triggered inflation to rise to 16 per cent instead of an expected 6 per cent and pushed at least 4 million people below the poverty line, the majority of whom are located in rural areas⁶.

Secondly, at the household level, renewable energy offers practical benefits that are as numerous and substantial as the constraints these households face. Basically, what makes the production of clean, renewable energy superior to conventional delivery of fossil fuel based electricity generation, besides the macroeconomic dimension we have just seen, is that it can be produced locally. However, among the principal sources of energy available in marginal areas, traditional ones are either already largely exploited (fuel wood), recycled (wastes) or limited (residues). Small-scale technologies utilizing these existing resources differently or new, alternative local renewable resources, including water, wind, sunlight and biomass (energy crops) for locally generated (and locally consumed) renewable energy have great potential to provide pathways out of abject poverty.

The services/benefits expected from such sustainable and clean energy sources may significantly contribute to improve many aspects of the harsh life of the rural poor and fully suit most of the MDGs as follows⁷:

Halving extreme poverty and hunger: When locally generated and locally used renewable energy is both a direct and indirect source of wealth. It directly contributes to reduce poverty when the implementation and operation of the equipment used to generate energy provides employment to local people. Indirectly, easier access to energy frees up productive time otherwise used to collect wood fuel and provides

the possibility to locally diversify productive activities, showing a leverage effect, in particular in local food production, processing and conservation.

Achieving universal education: Locally generated and locally used renewable energy provide deprived households extended opportunities in the evenings for child education. It also supports access to information and communication.

Promoting gender equality: Labour-intensive tasks such as fuel gathering, manual grinding and food preparation are mostly undertaken by women and children; improved access to energy significantly improves their living conditions and frees up time for education.

Reducing mortality/improving health: The use of renewable energy reduces indoor air pollution from household smoke. Availability of reliable and renewable sources of energy can significantly improve health services with local facilities that are currently lacking in the poorest areas such as refrigeration, vaccination and hospital equipment.

Ensuring environmental sustainability: Newer, cleaner technologies provide an alternative to greenhouse gas emissions and local environmental and social degradation by conventional energy⁸.

Rural populations who are deprived of basic energy services may find in renewable energy the cheapest option. Studies indicate that the cost of getting energy to the world's poor is affordable. For instance, there are estimates that the cost of lighting up the homes of 1.6 billion people with clean sustainable energy would be around US\$ 9 billion a year for ten years, while between US\$ 250 and US\$ 300 billion are spent every year on subsidizing fossil fuels and nuclear power⁹.

Still, progress in the rural poor's access to clean energy has been rather limited in Asia over the last 20 years, with the exception of China. A fundamental question was recently raised at the ECOSOC Ministerial Roundtable in an Issue Paper

⁶ According to data from BPS cited in <http://www.planetmole.org/06-09/poor-rises-to-over-39-million-indonesia.html> without the direct cash subsidy scheme implemented by the Indonesian Government, the number of people falling into poverty would have reached 14 million.

⁷ Adapted from Greenpeace-ITDG: Sustainable Energy for Poverty Reduction: an Action Plan.

⁸ Adapted from www.itdg.org/docs/advocacy/itdg-greenpeace-study.pdf. Greenpeace-ITDG: Sustainable Energy for Poverty Reduction: an Action Plan, page 15.

⁹ For reference see footnote above.

in relation to modern biomass development (as a source of renewable energy): “It has been pointed out that modern ways of using biomass more efficiently could go a long way towards meeting the basic energy services needs of rural populations. Would there be merit in creating a consortium for the promotion of modern biomass in developing countries that would assist with the adaptation of existing biomass technologies to local needs and would foster local industries for the manufacture, assembly and maintenance of biomass installations?”¹⁰ This question deserves to be extended to all alternative sources of clean and renewable energy.

Pro-poor renewable energy and rural development policies

Locally-generated clean, renewable energy has great potential to lift rural populations out of poverty in Asia and the Pacific but it represents a tremendous challenge. This requires, in particular: (i) assessing the socio-economic and technical feasibility of local sources and processing of clean, renewable energy; (ii) ensuring that benefits can be obtained without adverse agro-ecological effects on the environment; and (iii) ensuring that the generation of local clean, renewable energy genuinely contributes to poverty reduction.

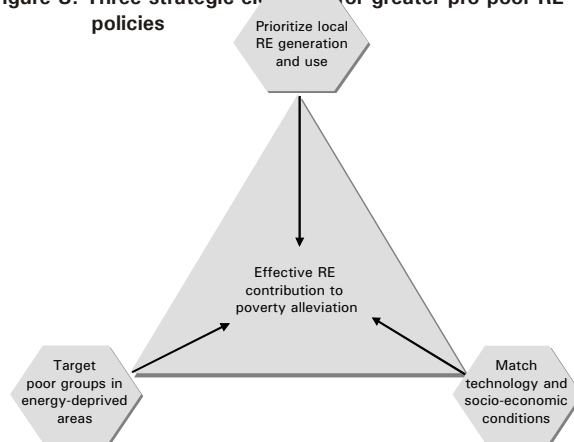
However, most national energy policies in Asia and the Pacific, beyond declarative intentions, rarely address *de facto* environmental preservation as a core objective and even more seldom effectively target the rural poor as primary beneficiaries of infrastructure development for access to energy.

A World Energy Council report states that: “Although considerable effort has been made in a number of developing countries to promote alternative energy sources for agricultural activities, most have failed. Many reasons can be found for these failures, but often it is because they have not been introduced with enough sensitivity to rural socio-political or economic constraints, or they have not taken into account

gender or land and resource tenure issues”¹¹.

This paper takes this statement as a starting point in its attempt to help reorient energy policy design and implementation towards poverty alleviation through the prioritization of some strategic elements. Here, at least three strategic points are advocated to be systematically included in pro-poor energy policy. These points correspond to a virtuous triangle where the central target of improving rural people's well-being is at the convergence of a locally-centred development focus, the selection of the right place and people, and the selection of appropriate technology as indicated in Figure 3.

Figure 3. Three strategic elements for greater pro-poor RE policies



Use local resources for local development

For reasons of remoteness, the lack of facilities and high investment cost, the option of expanding the existing electricity supply grid to energy deprived areas is not the cheapest one. It is also unlikely to be effective in reducing poverty. Urban poverty is evidence that the presence of an electricity distribution network does not empower the poor to consume the energy if they cannot afford it.

Any other strategy than using local resources for local development will reproduce the failures of the growth pattern that has exploited rural areas as

¹⁰ www.un.org/esa/coordination/ecosoc/hl2003/issuespaperUNIDO.pdf. Issues paper for ECOSOC Ministerial Roundtable discussion on: “Rural Development and Rural Energy Development”, UNIDO, 2003.

¹¹ http://www.worldenergy.org/wec-geis/publications/default/launches/rural/report_info.asp. The Challenge of Rural Energy Poverty in Developing Countries, WEC, 1999.

a source of cheap raw material, and a source of cheap labour throughout the world. While the latter has certainly led to develop industry-based high value-adding activities, it also resulted in dramatic welfare imbalance as illustrated by the increase in rural poverty share, degradation of natural resources, and rural-urban migration leading to urban poverty.

It is only after the living conditions of rural populations are raised, then rural communities have the capacity to become actively involved and partners in the outward-oriented industrialization processes. Local generation of energy is a way to provide local people with new jobs, new skills and self confidence.

Target the Poor in energy-deprived marginal areas

While it sounds tautological, this paper insists on the fact that energy-deprived marginal areas are where clean renewable energy is most needed, and where there are not many alternatives. In recent Asian forums, such as Biomass Asia and the Sustainable Asia Biomass Research Network (SABREN), there has been an overwhelming focus on using biomass as a source of clean, renewable energy to substitute fossil motor fuel propelled vehicles used by urban populations. Focus on technology or policies for energy deprived rural areas have been almost nonexistent. It is only recently, for example, that the Japan Institute launched a study on the use of Biomass for sustainable agriculture but it does not focus yet on poverty aspects. Concern with high pollution levels in the gigantic cities of Asia makes sense, but this is a problem of the rich, that results from policies that have favoured cheap (often subsidized) fossil energy, a choice that has generated externalities we all have to cope with today. If we don't want it to rapidly become a problem for the Poor, clean, renewable energy will have to become the fuel to power a hundred million people out of poverty.

Very strong policy commitment and political will is fundamental to prioritize clean and renewable energy AND poverty alleviation concomitantly. This is not a domain where large-scale private sector enterprises will voluntarily enter. This is clearly the domain of public policies, that is, R&D, public investment, fiscal incentives, infrastructure, human resource development and public-private partnership to tailor technologies

and implement schemes to the needs of the rural poor. There is a huge potential and mostly captive market for small and medium-scale domestic enterprises if a hundred million people are able to produce and utilize local energy.

Match Technologies with local socio-economic conditions

By nature, agriculture is highly dependent on uncontrollable variables that, in addition to the variety of human cultures, produce an immense diversity of natural and socio-economic environments. No unique technology may answer this diversity. Just as an example, not only the sources of clean, renewable energy such as fuel wood, organic waste, agricultural residues, energy crops, wind, water or sun vary, but also their local importance or availability, the use that is locally made of them, and the values that they are given.

The challenge is to concurrently identify what technologies are available, what the local socio-economic conditions are, and what technologies are suitable. Building an inventory, storing, analysing and sharing information on know-how, knowledge, experiences and practices at the regional level is crucial, since to succeed in significantly alleviating poverty, quick impacts and lasting effects are simultaneously required.

Financing as a policy orientation instrument

This paper presented an overview of the current situation and constraints rural poor populations face and the potential clean, renewable sources of energy they have to lift them out of poverty. It highlighted at least three conditions that are necessary to ensure that energy policies with a focus on Renewables reach the rural poor. These are: local generation and local use of renewable energy, targeting the Poor in energy-deprived areas, and focusing on technologies suitable to local conditions.

In this conclusion, it is also important to insist on the direct role financing plays in making clean, renewable energy available to poor rural populations. The first and obvious one is the funding of projects promoting clean technologies. Financing schemes are expected to make such technologies and the resulting energy more affordable to the rural poor.

However, there is another crucial role that financing schemes must play in order to ensure that clean, renewable energy investment actually reaches the Poor. This role is policy orientation. Financing institutions genuinely concerned with poverty alleviation have the power through criteria and conditionality to influence national and private investment and direct it. The theme of this APRACA CEO Policy forum evidences such will. It has now to issue operational rules to ensure that financing member institutions not only adhere to the ideas of funding the generation of alternative energy as a way out of poverty but also contribute to their implementation both directly and through their influence on policy orientation.

It is hoped that the three above-mentioned conditions are helpful to achieve this purpose as criteria for selecting the best investment options, that is, investment that will create local poles of development in less favoured areas of Asia and the Pacific. ■

CAPSA News and Activities

A Research Project: Food Security and Community Development from a Decentralization Perspective (SECOD)

The reports on the status and indicators as well as the achievement of regional programmes of food security, food insecurity and poverty at the regional and household levels in the decentralization era have been prepared by the research teams. This will be followed-up by a one-day seminar organized in the first week of December 2006 at the Bureau of Planning, Ministry of Agriculture, Jakarta, Indonesia. A seminar aimed to discuss and disseminate the research findings and collect feedback from the stakeholders. It will be attended by related policymakers within the Ministry of Agriculture and related stakeholders from Ministries of Home Affairs, People's Welfare and National Development Planning Board (BAPPENAS).

UNESCAP-CAPSA will provide funding to publish the English version of Project Reports, in the form of CAPSA Working Papers. ■

Seminar on “Financing Alternative Energy to Enhance Rural Development, Poverty Reduction and Energy Security”

The 51st Executive Committee Meeting and CEO Policy Forum of the Asia-Pacific Rural Agricultural Credit Association (APRACA) jointly organized by the APRACA, People's Credit Bank of Indonesia (BRI), Central Bank of Indonesia (BI) and Public Co-operative Bank of Indonesia (BUKOPIN) and supported by the Bogor Agricultural University (IPB) and UNESCAP-CAPSA, was held on 27th November 2006 at the Mandarin Hotel, Jakarta, Indonesia and attended by CEOs and senior officers of APRACA, delegates from international and local commercial banks, investors, government agencies and the private sector.

The objectives were to identify the trends and developments in alternative energy resources as they relate to agriculture and rural development, to discuss policy and financing aspects and to realize a workable action framework to ensure sustainable, environmentally friendly and efficient alternative energy for use in agricultural and rural development, job creation, poverty reduction and energy security.

UNESCAP-CAPSA contributed two papers to the seminar, namely: (i) “Powering Rural Poverty Alleviation with Renewable Energy”, prepared and presented by Dr. Robin Bourgeois; and (ii) “Poverty Issues, Economic Opportunities, Institutional Solutions and Finance of Bio-fuel in India”, prepared and presented by Engbert Grundemann. ■

A Research Project: Long-Term Dynamics in Rural Poverty (LTDRP)

The LTDRP project began in November 2005 funded by the Government of Indonesia. The main objective is to analyse the long-term dynamics of rural poverty covering land, labour and capital markets; physical and institutional infrastructure development; and agricultural/rural policy and its impact on agricultural households and the rural economy. The outputs are pathways out of poverty in the region (in Indonesia and other countries). The project research methodology is integrated, holistic and explorative and uses life history as well as time series against policy evolution.

The project is divided into three phases including: (i) Phase I is a pilot study, conducted on Java, Indonesia; (ii) Phase II will be carried out in other regions (Off-Java) of Indonesia; and (iii) Phase III will be conducted in other countries. The project is currently in Phase I and conducted by the project teams, namely: (i) Team A led by Prof. Tjondronegoro; (ii) Team B led by Prof. Willem Wolters of Wageningen University; and (iii) Team C led by Dr. William Collier.

Phase I activities include preliminary field work (conducted by Team A in October 2005), field work (carried out by Team B and ongoing) and intensive resurvey. An intensive resurvey was conducted by Team C in three selected villages in East Java, namely: Sumokembangsri, Gemarang and Sukosari. The salient points of the mentioned villages are: (i) Sumokembangsri: Most villagers commute daily to the large factory and other jobs near the village; (ii) Gemarang: Major monthly and yearly migrant workers work in other cities and abroad; (iii) Sukosari: Due to the tobacco processing industries in this village, few migrant workers work outside the village.

UNESCAP-CAPSA, in co-operation with the East Java Research and Development Agency (Badan Penelitian dan Pengembangan Daerah, Jawa Timur), have organized a seminar on Dynamics in Rural Social Economy: Case Studies in Three Selected Villages in East Java, on 23rd December 2006, at the University of Brawijaya, Malang, East Java, Indonesia. The objectives are: (i) to discuss and disseminate the research findings of Phase I of the LTDRP project, including land, labour, inputs and outputs, and capital markets as well as physical and institutional infrastructure development; (ii) to seek strategic policy options to reduce poverty; and (iii) to receive feedback for a future research agenda. The seminar will be attended by a multi-discipline specialists group from the provincial offices of Agriculture, Industry, Trade, Education, Public Works and Manpower and Transmigration; and the director and staff of UNESCAP-CAPSA, including the LTDRP project teams.

UNESCAP-CAPSA plans to organize a national seminar in Jakarta, Indonesia, to nationally discuss and transmit the LTDRP research results, to facilitate policy formulation as well as to observe feedback from the central government. ■

A Research Project: Impact Analysis of Economic Integration on Agriculture and Policy Proposals towards Poverty Alleviation in Rural East Asia (ECOIN)

A new project: Impact Analyses of Economic Integration on Agriculture and Policy Proposals towards Poverty Alleviation in Rural East Asia (ECOIN) is a five-year collaborative project with Japan International Research Center for Agricultural Sciences (JIRCAS). It began in July 2006 and seven Asian countries are participating, namely Cambodia, People's Republic of China, Indonesia, Lao People's Democratic Republic, Malaysia, Thailand and Viet Nam.

The project aims are: (i) to clarify the impacts of economic integration on East Asian agriculture, especially on diversified and high-value agriculture, and diversified income resources and employment opportunities through farming marketing integration; and (ii) to propose ways to take advantage of economic integration for poverty reduction and to minimize the negative influences. The project focuses not only on the impacts of economic integration but also on the measures to support the poor. The results of the study will be provided to policymakers for poverty alleviation.

The study was carried out by a visiting researcher dispatched by JIRCAS, and UNESCAP CAPSA provided research support services.

A rural household survey is being conducted at a study village in Indonesia to understand the impacts of recent changes in the social and economic conditions of rural households. ■

A Research Project: Development of Methodology for Analysing Sustainability of Biomass Resource Use in Tropical Asia (BIOMASS)

The study on Development of Methodology for Analysing Sustainability of Biomass Resource Use in Tropical Asia (BIOMASS) is a two-year collaborative project between Japan International Research Center for Agricultural Sciences (JIRCAS) and UNESCAP-CAPSA. The funding source is the contribution fund in-kind from the Government of Japan through JIRCAS and research support services from UNESCAP-CAPSA. The project began in July 2006 and is conducted by a visiting researcher dispatched by JIRCAS.

The study aims to formulate a database that can be used to estimate the potential of biomass production, its economic feasibility and environmental sustainability.

In 2006, data sets were compiled on biomass resources in four tropical Asian countries (Indonesia, Malaysia, Thailand and Viet Nam), containing harvested area, cost of production and supporting policies of energy crops in respective countries. A report is being prepared and follow-up is expected to include collaboration with various agencies. ■

Saemaul Undong Project

The Saemaul Undong Project, under the Poverty and Development Division (PDD) of UNESCAP is planned to be implemented in four countries, namely, Lao People's Democratic Republic, Cambodia, Sri Lanka and Indonesia. In preparation for this project Ms. Soo Young Park, Expert on community development from the PDD office visited Indonesia from 7th to 10th November 2006. CAPSA facilitated her visit to various agencies in Jakarta and a field visit to a village near Bogor having undergone similar community development activities as the project. She also had the opportunity to discuss the project with some senior staff and the director of CAPSA. ■

New Staff Member

Erika Speelman

On 10th September, Erika Speelman joined UNESCAP-CAPSA as an Associate Expert on GIS, Modelling and Linear Modules. She read her Masters degree on Tropical Land Use at Wageningen University, the Netherlands. Her interests lie in the field of biophysical and socio-economic sustainability of peasant systems and the use of models to learn about, assess and reach this. During her studies she conducted various research in different parts of the world, namely China, Mexico and Ethiopia.



After graduation in 2005 Erika worked in Mexico on sustainability evaluation and modelling. She will be working on CAPSA's ongoing and new projects with a special focus on modelling and GIS.

William Henderson

Joined CAPSA in October 2006 for a one-year placement as an Associate Researcher. William is from Australia and most recently worked as an economist with the regional government of the Northern Territory. He is also studying for his Masters in Economics at the University of New England. William will contribute to CAPSA's research activities, particularly in the area of rural poverty. ■

