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I.D.S. INTERNAL WORKING PAPER no. 28

POLICIES FOR FUTURE RURAL LIVELIHOODS

by

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February 1975

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Summary Abstract

Staggering increases in the rural populations of many developing countries are expected. UN projections from 1970 to 2000 give increases of rural populations of 76 per cent in South Asia and 86 per cent in Africa. Yet even now many rural people are already severely deprived and at risk.

Increasing national food production in developing countries is a necessary but not sufficient condition for improvement. It is not sufficient because so much starvation, malnutrition and deprivation result not from absolute shortages of food but from lack of incomes to purchase it. Family planning can eventually contribute to achieving a stable population-resources balance, but a precondition for its widespread adoption is higher levels of living. The challenge is simple but intimidating: so to generate livelihoods and so to raise the levels of living of all members of the increasing rural populations that they can all afford the food and other goods they need and that they will wish to limit their families. The longer this challenge is left, the harder it becomes; in some countries, it may already be almost too late.

In the coming long crisis it will be vital to think in terms of three principles: biological efficiency - the productivity of scarce resources such as land and water in terms of calories of human food produced; livelihood-intensity- the extent to which net livelihoods are created by a policy of programme; and minimum distribution - the provision of minimum acceptable levels of living for those who are worst off.

Four major thrusts are suggested: *and*

1. Environment-specific R and D/planning for future populations. Planning should be backwards from possible futures in order to identify the R and D needed now to develop the agricultural and other technologies for tolerable and adequate future livelihoods. A think tank approach is required with exceptionally imaginative natural scientists, social scientists and inspired practical men working together freely and creatively on these great problems and opportunities.
2. The design and choice of technology. Technologies should be livelihood-centred, designed to sustain people with work and incomes. Effort should concentrate on the transfer of existing technologies between developing countries, on their improvement, on developing new technologies ~~between developing countries, on their~~

~~improvement, on developing new technologies, and on long-term research for major scientific breakthroughs.~~ Throughout, economies of small scale, divisibility, livelihood intensity, and continuity of employment generated should be guidelines.

3. Redistribution of resources and livelihoods. In many rural environments the reallocation of resources, notably land and access to water, appears an inescapable component of any policy to achieve tolerable rural livelihoods. The richer countries should be prepared to give exceptional assistance to any developing country which accepts the political costs of effective reform of land distribution and access to water.

4. Creating a cadre of rural expertise. The entirely new order of effort required to meet the scale of the challenge requires the mustering of many more people with experience and expertise in rural development and their continual replenishment. A very much larger cadre of people is needed who can be recycled variously through direct rural contact, research, R and D, planning, consultancy, technical assistance and work in government agencies. This pool of expertise should be international in character, with increasing exchanges between developing countries to enable the transfer and cross-fertilisation of ideas and experience.

The greatest danger is doing too little and too late so that in the year 2000 we or our successors may be simply saying the same things all over again. The situation is one of long-term escalating emergency. Whether it can be overcome depends critically upon the vision and courage of our political leaders and whether they can induce the privileged in all countries to accept sacrifices so that the deprived can achieve a better life.

The alternative is unthinkable.

Policies for Future Rural Livelihoods

This paper presents a personal view based largely on experience in Africa and South Asia, although the conclusions may apply more widely. It does not consider many relevant topics such as international terms of trade, commodity agreements, food aid, domestic pricing policies, systems of food procurement and distribution, or rural management, important though these are. Nor is it mainly concerned with the immediate food crisis. It is directed instead selectively at some of the longer-term questions concerning how rural environments in developing countries can possibly sustain much larger populations at acceptable levels of living.

The Scale and Nature of the Challenge

The prospect is daunting. Already for many rural people there is an agonising balance of misery in the choice between starving in the countryside and starving in the city. Yet rural populations are growing fast and in most developing countries will have risen dramatically by the end of the century. UN projections from 1970 to 2000 show increases in rural populations of 76 per cent in South Asia and 86 per cent in Africa. Urban populations are projected to increase in the same period over threefold in South Asia and over fourfold in Africa. The mind recoils from the implications of these figures. Those many rural environments which are already gravely overpopulated will have somehow to sustain much larger populations than now, and it is at first difficult to see how this can happen without unspeakable misery.

Rural Population 1970 - 2000
(Millions)

	1970	2000	Percentage increase
<u>South Asia</u>	888	1,561	76
Middle South Asia	612	1,089	78
South-East Asia	227	405	78
South-West Asia	49	67	37
<u>Africa</u>	268	498	86
Western Africa	81	144	78
Eastern Africa	88	184	109
Middle Africa	30	48	60
Northern Africa	56	101	80
Southern Africa	12	21	75
<u>(Latin America)</u>			
Caribbean	15	22	47
<u>(Oceania)</u>			
Melanesia	2	6	200*
Polynesia and Micronesia	1	2	100*

* liable to exceptional error because of the rounding in the base figures, themselves rounded to millions.

Source: United Nations, The World Population Situation in 1970, Department of Economic and Social Affairs, Population Studies No. 49, New York 1971: and explanations see Chapter VI p.63 "Trends and Prospects in Urban and Rural Population", (pp.53-66)

The challenge presents three points for attack: food supply, population limitation, and rural livelihoods.

First, the food supply situation in the short-term is aggravated by the difficulty developing countries have buying on world markets the food and fertiliser they need. The cost and scarcity of food and fertiliser are linked with the wasteful and biologically inefficient structure of the richer economies. Far more food is produced in the world than the human race could possibly eat but much of it is fed to livestock. In 1969-71 more feed grains were fed to livestock in the richer countries than the human cereal consumption of India and China together.¹⁾ Much chemical fertiliser is used to produce these feedgrains and also for lawns, golf courses and cemeteries. As a gesture of responsible humanity, the richer countries should restrain their inefficient livestock industries, modify their diets and prohibit the use of chemical fertiliser for purposes other than growing food. It is difficult to see how this could fail to improve the availability and reduce the cost of food and fertiliser to developing countries whose need is so much greater.

In the longer-term, there is almost universal agreement that most of the food supply problem has to be solved through production within the developing countries themselves. The goal of greater or complete self-sufficiency in food does not seem to be in dispute. What is so alarming is the scale of the problem, with a need to more than double production before the end of the century in order merely to feed the rural and urban populations, let alone to generate a surplus.

To express the problem in terms of food production alone fails to confront the true nature of malnutrition. There are already many rural people who are unable to obtain food even though it is available. Within a region, or within a village, there may be enough food to feed all the inhabitants, but some lack the means to buy it. Malnutrition is much, much more a question of incomes and poverty than we used to believe. As such, it cannot be solved only by producing more food. It can only be solved by providing those who are deprived either with means to grow their own food or with livelihoods so that they can securely earn enough to buy it. The implication is the need for effective programmes

1. FAO "Population, Food Supply and Agricultural Development", in Monthly Bulletin of Agricultural Economics and Statistics, Vol 23, September 1974, p.5. This article provides an excellent review of the world situation.

, disappointing.

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directed specifically at deprived target groups to provide them with livelihoods. A further chilling implication is that there is already a huge backlog of people subsisting below an acceptable level of living even before considering the great population surge of the next quarter century.

The second point of attack, population limitation, presents few prospects of a short-term breakthrough. Except in some smaller developing countries, the effect of family planning programmes has been slight. Nothing said here should be taken as a slight on family planning: it has a part to play and should be supported. But the evidence is overwhelming that an essential precondition for widespread acceptance is a low death rate and a rising standard of living. In India to take one example, the declining death rate has levelled off, and for many people in the past two years their low level of living has dropped even further. In these circumstances, for the great majority of the rural people, the preconditions for family limitation do not exist. The solution at this stage does not then lie in herculean efforts with family planning; it lies in herculean efforts to raise the levels of living of the great mass of rural people in order, before it is too late, to create the preconditions for the acceptance of family planning and population stability.

Thus both the problem of malnutrition and the problem of family planning bring us to the third point of attack - the creation of rural livelihoods. Whether it will be possible to raise levels of living fast enough to overtake population growth perhaps no-one can say with authority. What we can do is recognise the scale and nature of the problem, be open to fresh ways of looking at it, and bend our collective efforts to following through the implications.

Principles for Rural Development Policies

Many principles can be applied to the design and choice of rural development policies and programmes. But in thinking about the needs to achieve dramatic future increases in food supply, and to eliminate malnutrition among the deprived and to generate many more livelihoods, three principles appear especially powerful and useful. These are the principles of biological efficiency, of livelihood-intensity, and of minimum distribution.

Biological efficiency refers to the usable calories of food produced per unit of scarce resource such as land or water. This principle applies to choices of land and water use and to choices of crops and agricultural enterprise. In many rural areas a livestock fattening industry is much less efficient than the growing of food crops on the same land or with the

same water: that is, per unit of land or per unit of water it produces far fewer calories for human consumption. Increasingly, especially in areas of dense population pressure, this principle will have to be applied to agricultural research and extension policies.

Livelihood-intensity refers to the extent to which livelihoods are created and sustained by a policy or programme. It can be measured in terms of the numbers of people supported at or above an acceptable minimum standard of living. As a principle it emphasises that we are dealing with real people and real families and not just with economists' units of labour input. It can and should be applied to a whole range of policies which affect rural livelihoods such as pricing, food procurement, licensing, agricultural research, seed-breeding, processing technology, marketing systems, water distribution and education, asking in each case what are the net livelihood effects of alternative policies or programmes.

Minimum distribution refers to the provision of minimum acceptable levels of living for those who are worst off. Livelihood-intensive programmes may often help those who least need help, leaving the landless labourers, rural migrants, and widows without a means of living. So long as there are many malnourished and without secure sources of income, it will always be right to ask the question - who benefits?

Combining these three principles, one way of expressing the objective for the next quarter century could be: through increasing biological efficiency in agriculture, through policies to create and sustain rural livelihoods, and through provision of livelihoods for those who are most deprived, to achieve acceptable levels of living for all rural people.

Many policies and initiatives are relevant to such a goal. The primacy of agriculture is unquestioned but there are many other opportunities - in livelihood-intensive processing, in substituting rural for urban products, in permitting the informal sector to flourish without harassment, in seasonal labour-intensive public works - which can be exploited. Many great efforts have been and are being made. But we have reached a point now at which some of the less obvious and more difficult tasks become imperative - drastically improving the management of bureaucracies which manage irrigation water, identifying and filling interdisciplinary gaps in research, and learning much more from rural people themselves, to take three disparate examples. Besides these, however, I want to suggest that there are four critical and complementary thrusts which could and should be re-

inforced and driven home, and which are particularly appropriate for consideration at this time. These are:

- environment ~ specific R and D planning for future populations.
- design and choice of livelihood-intensive technologies.
- distribution of resources and livelihoods.
- creating a cadre of rural expertise.

Environment-specific R and D and Planning for Future Populations

With the exception of those countries, like Zambia and Sri Lanka which have additional land for cultivation or pasturage, we may usually be beyond the point at which we can any longer afford the luxury of conventional thinking about rural development. The conventional approach starts in the present and involves programmes and projects which are considered developmental. It does not directly confront the critical long-term issues of biologically efficient food production, of livelihood provision, and of income distribution. In those rapidly spreading areas where there is serious pressure on resources, however, two complementary approaches are required:

first, to adopt an environment-specific approach. In most African countries there are broad zones of similar ecology such as pastoral areas, areas of savannah and bush marginal for agriculture, which make coherent zones for research and policy purposes. In South Asia Sri Lanka has agricultural research stations for the three main ecological zones and India has programmes specific to environmental types in the Drought-Prone Areas Programme and the Command Areas Development Programme (for irrigation). The advantages of such approaches include:

- using scarce research, survey and R and D resources sparingly
- the production of zone-wide policies
- enhanced opportunities for international exchange of experience through the identification of similar zones in different countries;

second, to plan backwards from possible futures. The year 2000 is a convenient and dramatic date to adopt. The first step is to assess the population requiring livelihoods in the year 2000 and the resource endowments available. The next is to design possible futures around scenarios which would enable that population to produce its food in a biologically efficient manner and with adequate livelihoods acceptably distributed. The next step is to look backwards from those scenarios to the present and see what steps need to be taken now to make their attainment possible. Often it will emerge that R and D is needed for technologies which do not yet exist, and that resource redistribution is unavoidable between the present time and a quarter of a century hence.

For this future-based planning many guidelines could be suggested. Two may be especially critical. The first is planning to create a labour shortage. This may appear ridiculous or impossible but I do not believe it is. Labour

shortages solve many problems - they mop up those who lack livelihoods, they raise wages, and they redistribute incomes in favour of the less well-off sections of the community. The second guideline is to plan for continuous productive activity throughout the year. This too may appear ridiculous or impossible but again I do not believe it is. Where, as with much rainfed agriculture and with delta and tank irrigation, there are seasonal labour peaks and troughs, public works can be planned for the poorer target groups in the labour-slack seasons. Where, as with much well irrigation, cultivation can be continuous throughout the year, this should be encouraged. Sometimes, too, preference can be given to crops, like tea in Kenya, which demand labour throughout most of the year.

Future-based environment-specific thinking requires small groups of exceptionally imaginative natural scientists, social scientists and inspired practical men to be assigned to each environment - be it mountain areas, alluvial plains, savannah, irrigation command areas, or whatever. They need the time and motivation to spend time listening to rural people (and not only the wealthier ones), the courage to speculate and take risks, and the authority and resources (perhaps with some international support) to be able to sponsor and influence R and D. They must be boldly creative, working freely and without hierarchy in a continuous think-tank atmosphere, with wide terms of reference and freedom to travel, to communicate, to innovate and to experiment. I believe the potential of such an approach is vast.

The Design and Choice of Livelihood-intensive Technologies.

The design and choice of technology (including agricultural technology such as new seeds and practices) provide one of the greatest opportunities for generating livelihoods and one of the greatest dangers of destroying them. Many crimes have been committed in the name of development by rich country companies and aid agencies on the one hand and by developing country leaders and ministries on the other in conspiring to introduce "modern" technologies into rural situations where their net effect is to deprive people of livelihoods. One example can suffice. In South India it has been calculated that a Modern Rice Mill working at capacity would employ 60 people, 25 of them labourers, and would displace 28 traditional huller mills employing 412 people, of whom 280 are labourers. The net effect of its introduction might then be to deprive of their livelihoods no less than 352 people, of whom 255 would be in the especially vulnerable low income group.² Whatever advantages the so-called Modern Rice Mill may have, these grave defects should surely weigh heavily against its introduction. The principle at least is clear. One of the main criteria in the design and choice of technology should be the net livelihoods it provides, and how these are distributed throughout the community. Yet in 1975 the governments of rich and poor countries still combine to transfer technologies which strike poverty and deprivation into rural lives. The machinery salesman or the vendor of the modern mill never see the people who are put out of work, their families and children; nor indeed may those who sign the contract. As so often, the terminal damage of distant decisions is unseen.

Conversely, the potential for generating new livelihoods through good R and D has much untapped potential. There are centres like that at Arusha in Tanzania or organisations like the Brigades in Botswana which develop good rural technologies. But the vast R and D expenditures of the developed world on self-indulgent adventures like reaching the moon or building Concorde compare with disgracefully pitiful resources devoted to rural technology which is still so often regarded as the domain of rather dotty eccentrics. Rural technology, including agricultural research, deserves the best and most versatile brains in the world, and should carry far, far higher prestige than the misplaced sophistication of the space age. We need livelihood-centred technologies, and developing them requires breadth of perception as well as technical skill.

The potential of technology can be realised through four types of initiatives:

- transferring existing technologies from one environment or country to another. The opportunities between developing countries seem enormous, and gravely under-exploited. Why, for example, are there bicycle trailers throughout Asia but hardly any in Africa? What are the relative advantages of the many animal-powered water-lift systems throughout the world? This is a field in which developing countries could without delay help one another.

2. Barbara Harriss, "A Which Guide to Appropriate Rice Processing Technologies in South Asia", pp. 27-28, and "Operational Efficiency in Rice Milling Technologies in

- improving existing rural technologies. One may ask - how many engineers and scientists are devoting their lives to examining present rural technologies and developing feasible improvements? If they are few, why? What incentives are needed to induce more people to work in this field?

- devising new technologies. This may often require exceptional ability because of the need to avoid the capital-intensive labour-sparing biases of industrial technology

- major scientific breakthroughs and their application. It is here perhaps that the richer countries may be able to help in the early stages, for example into research into converting cellulose into starches, or developing solar pumps. But in general it is far preferable that the R and D be carried out in developing countries near the environment in which the technology is to be used.

Throughout it is vital to plan for economies of small scale, for divisibilities, and for livelihood-intensity of use. There is a link here between environment-specific future-oriented planning and R and D. It should be a function of that planning to specify the technologies which need to be developed now for the futures envisaged. There may well be a case for setting up environment-specific R and D units.

Distribution of Resources and Livelihoods

For many environments it cannot be pretended that acceptable levels of living can be achieved for all rural people without a redistribution of resources and livelihoods. The main policies involved are land reform, reform in access to water for agriculture or watering livestock, and the ownership of productive assets. Suggestions about redistributive reform come badly from a citizen of a rich country which benefits from international inequalities. But no purpose is served and much harm would be done by sweeping the question under the carpet.

The need and the approach are environment-specific. Fortunate are those countries with spare land and water that can be colonised. For others there are sometimes communal resources which can be identified (communal pasturage, bodies of water, fisheries, valley bottoms subject to flooding, forests, woodlands, wildlife) which can be exploited to provide additional livelihoods. Another approach is to develop and require the use of small-scale technologies, such as small pumps, to give a competitive advantage to very small farmers (an approach which may even set the scene for subsequent land reform). But often, and precisely in environments where population pressure is acute, such options do not exist. In such environments, future-based livelihood planning can be expected to demonstrate beyond dispute that the only feasible course is redistributive reform.

2. (cont.) North Arcot District, Tamil Nadu" pp. 15-16 papers to the seminar on agrarian change in rice-growing areas of Tamil Nadu and Sri Lanka, December 1974 (available from the Centre of South Asian Studies, Laundress Lane, Cambridge, UK).

Land reform, as the most common example, is notoriously difficult politically. Even in the rare cases, such as Kerala and Sri Lanka, where it has been pushed along, there have been daunting difficulties. In these circumstances, the very least that the richer countries can do is offer special assistance to those countries which grasp the nettle and implement effective land reform, providing for example foreign exchange support to cover losses in export earnings during the transition.

Creating a Cadre of Rural Expertise

Internationally as well as nationally an entirely new order of effort is required to meet the scale of challenge posed. But rural development is notoriously slow and difficult and there are grave problems even in perceiving and understanding rural realities and seeing what might be done. Taken together, these two facts mean that a much larger, more experienced and more committed cadre of people is needed to work in this field. Increasingly this cadre can and should derive from the developing countries but for good future international collaboration it is also vital that the richer countries should be able to maintain a resource of experience to guide their contributions.

Creating and replenishing such a pool of experience and expertise on the scale needed requires a high degree of reciprocity, with exchanges between all countries. The richer countries can contribute with certain forms of specialised training; the developing countries can contribute by providing opportunities for technical assistance, volunteer and research personnel to be the recipients of direct rural experience. The outcome of such exchanges should be the creation of a cadre of experienced and committed people from all countries who could be continually recycled through a mixture of direct rural contact, research, R and D, consultancy, technical assistance and working in government agencies, transferring ideas and experience between countries, and contributing through this international cross-fertilisation to solving the problems of food production, or rural development, and of the provision of rural livelihoods.

Conclusion

The greatest danger is doing too little and doing it too late. We are faced with an escalating emergency. To overcome it requires quite exceptional will and imagination. Will we or our successors be saying the same things all over again in the year 2000? Will things be even worse? Or will a prospect have been opened up of adequately fed rural populations with stable livelihoods and acceptable levels of living?

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The answer depends on many factors and many people. But most critically it depends upon whether our political leaders in all countries have the vision and courage to lead, inducing the privileged to accept sacrifices so that the deprived can achieve a better life.

The alternative is unthinkable.

Robert Chambers
13 February 1975

RC/SH