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INAUGURAL ADDRESS

Beyond the 12th Plan Approach*

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I

INTRODUCTION

I am grateful to the Indian Society of Agricultural Economics for asking me to inaugurate this Conference. Together with the Indian Econometric Society and the Indian Society of Labour Economics it is a serious professional group on an important subject area of the Economics profession in India. Set up by Sir Malcolm Darling and with the support of stalwarts like Dr. Manilal Nanavati, Dr. J.J. Anjaria, Prof. M.L. Dantwala and many other illustrious names it continues its traditions with Prof. C. Ramasamy and we are all looking forward to hearing our distinguished Conference President, Dr. N.A. Mujumdar today. Asked to speak at short notice I am speaking on the Approach to the Twelfth Plan for the agricultural sector, which the Planning Commission has released and which is a subject for this Conference. I had recently written a piece on the future of Indian agriculture in a rural-urban continuum which was published in the Society's Journal (Alagh, 2011, pp.165-177), which looks at the emerging problems and opportunities. Many of these ideas are incorporated in the Approach Paper and some are not. I decided to revisit the projections and policies in the rural urban continuum paper in the light of the Approach Paper so that we can help the policy makers.

The Approach Paper is good in agriculture. It does not have many new ideas, but it is practical. It does not have the fire of the Mid-Term Appraisal (MTA) of the Tenth Plan and the Eleventh Plan but discusses in a reasonably complete manner most issues relating to agriculture. We discuss the issues they have laid out.

Water

This is an issue highlighted outside agriculture and yet is critical for it. In fact many issues for agriculture are strictly outside the sector but are critical in the new development ray of the economy. The Approach paper says:

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*This is a revised version of the Inaugural Address delivered at the 71st Annual Conference of the Indian Society of Agricultural Economics held at University of Agricultural Sciences, Dharwad.

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"Based on the aquifer mapping exercise, we need to develop sustainable groundwater management plans for each aquifer. This requires action on the ground involving partnerships of stakeholders at the village-level with hydro-geologists and social mobilisers, who would guide collective sharing and sequential use of groundwater based on a careful understanding of the storage and transmission characteristics of different aquifers in each of the hydrogeological *settings* outlined in the MTA of the XIth Plan. Promising work on a reasonable scale has started in this direction in Andhra Pradesh. *The Andhra Pradesh Farmer Managed. Groundwater Systems (APFAMGS)* project is supported by the Food and Agriculture Organization and implemented by NGOs in seven drought-prone districts of Andhra Pradesh. The project employs participatory hydrogeological monitoring, by engaging farmers in data collection and analysis, and building their understanding of the dynamics and status of groundwater in local aquifers. This is complemented with *crop water budgeting, whereby the quantity of water required for crops is assessed* at the aquifer level and compared with the amount of groundwater actually available to arrive at a suitable cropping pattern that would permit sustainable groundwater use. The total outreach of the programme is estimated at 1 million farmers. Such initiatives need to be undertaken at many more locations in the Twelfth Plan".

In the rural-urban continuum paper we refer to the Report which high lights the APFAMGS (Alagh, 2009), but more is necessary, as we see later.

II

MISSING THE RURAL-URBAN CONTINUUM

The chapter on rural transformation in the Approach begins by saying that "The Census of 2011 estimates that 833 million people continue to live in rural India". But until very recently the Planning Commission was projecting that 870 million persons would live in rural India in 2011. They under-estimated the rural population moving to small (Census, not official) towns by 37 million people. That is a lot of people and for an approach titled 'inclusive growth' a critical slip up. Worse still the Planning Commission having missed the bus on decentralised urbanisation in the last decade, still continues with its old projections for the future. Rural population it continues to say will be 60 per cent in 2030.

In the rural-urban continuum, we say "We project that the rural population share will go down to 58 per cent in 2020 and 55 per cent in 2025. This compares with the official projection of 68 per cent in 2020 and 64 per cent in 2025 (Government of India, 2006, Table 10) …in my S.K. Dey Centenary Memorial Lecture in 2006 at the National Institute of Rural Development (Alagh, 2007) I had argued that urbanisation in Gujarat was clearly underestimated and that the actual growth of urbanisation was around 5 per cent and not half of that". We give UN studies and so on to butress our work. Such serious mistakes in policies are made on account of an inability to catch major societal trends. The rural-urban continuum paper argued that this mistake

ignores the potential of large villages and small towns as market centres terribly important for a diversifying agriculture. The FAO goes on to add: “This is particularly important, discussed in more detail below, when we look at the village-level economies. If we measure how isolated the rural population is in terms of market access, using a definition of more than five hours of travel time to reach a market town of more than 5,000 people, only five per cent of South Asians live in “remote areas” whereas more than 30 per cent of Africans are in this situation. Similar characteristics hold true for the per cent of the population living in higher potential agricultural areas, as shown below”. (FAO, 2008, p.4).Our argument therefore is that urbanisation is proceeding much faster than earlier estimated and that recognition is critical for agricultural growth. A satellite picture (Figure 1) from the Center for International Earth Science Information (2004) given in the rural-urban continuum is illuminating.

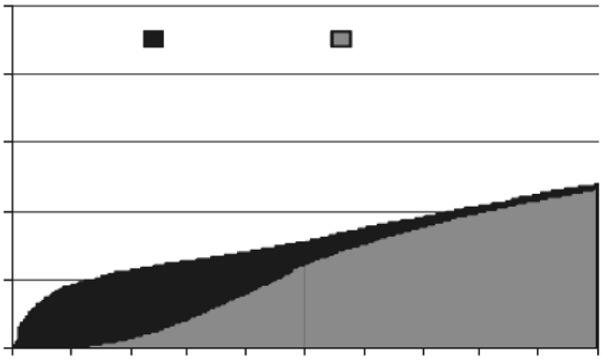

Figure 1.Y axis is % of population and X axis is population density.

Food Demand and Food Security

The Approach Paper says “On the demand side, a 9 per cent growth of the economy as a whole is expected to generate the demand to support 4 per cent growth in agriculture with foodgrains growing at about 2 per cent per year and non-food grains (notably, horticulture, livestock, dairying, poultry and fisheries) growing at 5 to 6 per cent.

7.9 The challenge is how to feed India’s growing population with rising incomes, but limited land and water resources. The economy is expected to grow strongly and, … pressure on food demand is likely to remain strong over the Twelfth Plan period although consumption is likely to be more diversified as cereals now account for only 15 per cent of the total consumption expenditure.

7.10 The food consumption basket is getting increasingly diversified and though cereals still dominate, this dominance is being increasingly eroded by rising

expenditure on fruit, vegetables, milk, eggs, meat and fish which together is sometimes referred to as "high value" segment. This transformation of the Indian food consumption basket is in-line with expectations. The NSSO data also shows that between 1993/94 and 2004/05 *per capita human* consumption of cereals increased among the poorest 5 per cent of the population, while it fell among the remaining 95 per cent. The decline was also sharper in rural areas than in urban ones. However, cereals demand for animal feed is accelerating".

Finally the planners have fallen in line. We have said this all along also in the rural-urban continuum. 'My projections contained in Table 2 for the UN, include diversification away from grains and are lower for cereals and foodgrains as compared to the IFFPRI and other Normative projections. However the non-foodgrain projections are much higher than those of the High Foodgrain Indian Projections. Our projections from the UN Alagh model (Alagh, UNU, 2000, 2001, 2006) as described in decadal growth earlier are as follows:

TABLE 2. AGRICULTURAL PROJECTIONS FOR INDIA 2020

(*million tonnes*)

(1)	Commodity 2020 (2)
Foodgrains	225
Edible Oil	19
Sugar	42
Potato	40
Fruits and vegetables	176
Milk	128
Meat	6
Eggs	5
Fish	14

We showed earlier that for the poor, "Cereals have a low expenditure elasticity in the nineties for the same group. The elasticity was low for the poor in the seventies and is less than 0.5 for the same group in the nineties. It also gives another feature. For commodities like milk and milk products, eggs and meat, edible oil and sugar, the estimates of expenditure elasticities were high for poor households, in some cases above 2, but were below 1 although not very low for the non- poor. There is a large literature on the declining consumption share of grains by poor households in India and its impact on poverty estimates". The horror story that targeting the poor will hurt diversification is wrong. We have always argued that the really poor must be targeted. These are the women-headed households, the destitutes, the girl child and so on. It may be noted that the National Advisory Council has also opposed the EGOM which was leaving this category of beneficiaries to the States. Actually I worry about the severely malnourished girl child in the areas called the geography of hunger in India, where my then boss, Rajiv Gandhi would push me. For the country as a whole my worry could be as low as a sixth, but for some areas that cohort will be three out of four. We have the money. Soniaji has the will. Now lets do it.

We will of course make mistakes. To begin with all such estimates are stochastic in nature and only the charlatans and some politicians are always sure. But corresponding to market signals, India's vibrant democracy will tell us where we are wrong. Everybody will want free food. Who doesn't, but once its known its not given our people are realistic enough to accept that the subsidy has to go according to need as the Planning Commission says. The areas and population cohorts of severe malnutrition or what is called chronic deprivation will need a special focus. The correlates of these distributions are known but will be finessed with praxis. The really deserving must get food free. Here the Planning Commission seems to suggest some market elements and that is wrong. It will frighten away the really deserving and market logic can be carried too far. The Commission talks of need. It must operationalise that. Beyond that they are right. Actually the idea that the above poverty line population is entitled to grain from the public distribution system at an minimum support price (MSP) plus price is a googly, if there ever was one. The average Indian housewife is clever enough to stay away from the ration shop at an MSP plus price.

III

ACTION ON MAJOR POLICIES

Widespread agricultural growth is the answer. It is not enough to project but also act on markets (already shown as weak), water, technology and economic support.

Water management the Approach says is critical for agriculture:

> "Steps to greatly improve governance in water management through Water User Associations such as *Pani Panchayats and similar PRI-based institutions.* A focus on Command Area Development and the rehabilitation and physical modernisation of existing major irrigation systems. Extensive rainwater harvesting assisted by space-based maps with active ground truthing and convergence with other development schemes. Comprehensive aquifer mapping and extensive ground water recharge.Move towards sprinkler and drip irrigation and away from flood irrigation. Enable assured irrigation to much more land far beyond the present 42 per cent of arable land. Strengthen drinking water resources. Integrate these activities with existing surface reservoir based canal irrigation".

The rural-urban continuum says "While a lot of research has been done and is available (Alagh, FAO/UNESCO, 2002), the real issues are policy rules for fast replicability of existing knowledge and success stories. Community institutions have to be at the heart of this process. Successful projects examined have varied considerably. Watershed development, for settled agriculture alternately tree crops,

reclamation of saline lands, farmers run lower level irrigation systems, aquifer management in difficult situations, like coastal aquifers, tribal irrigation cooperatives, tank irrigation have all been reported as success stories and studied. The question is replicability on a larger scale. We have (Alagh, 2003) tried to set out some policy rules which we argued if applied in functioning policies may reverse the tide. Progress has recently been reviewed (Planning Commission, 2007)".

The rural-urban continuum estimates that an increase of 7 per cent in the real wage rate in agriculture is possible if the cropping intensity outcomes of successful water projects are replicated. This is a lot and worth aiming at.

The Approach Paper says; "Technology is the main prime mover of productivity in agriculture where natural resources are fixed. *Studies have shown that at least one-third of the future growth* in productivity should come through innovations in crop technologies. Public sector technology generation often fails to take into account farmers' needs, perceptions and location-specific conditions for each crop, leading to significant gaps between the varieties released by public sector institutions and the number of varieties actually used by the farmers. Private sector research and the seed industry often focus on those crops and varieties which have adequate scale (massive markets) and scope (repeated sales). As a result, some crops/crop groups get little research attention. This phenomenon is most visible in predominantly rainfed crops like pulses and some oilseeds".

This recognition of technology gives us great happiness and that technology will source a third of growth was the rural-urban continuum swan song and so it said;

"Technology is going to be the kingpin of solutions. We saw earlier that the high rate of capital formation in India agriculture of 21 per cent of agricultural GDP is not leading to a commensurate increase in agricultural growth. Groups pushing technology should be in the driver's seats and that should be with performance markers. Since the land base has stopped growing, productivity growth will have to be much higher. At the request of the present author, a Indian Statistical Institute team (Mukherji *et al.*, 2001) worked out that the past growth of productivity in agriculture was 1.62% annual in the decade 1981-90 and 1.55% annual in the decade 1991-2000. This growth will have to be 1.72 to 2.08% annual in the period 2001-2020 if agriculture grows at roughly 3.5 to 4% annual and 1.9 to 2.5% annual if agriculture grows at 3.8 to 4.8% annual in the period 2001-20. Thus to source higher growth factor productivity will have to rise at least by a third, which is difficult in agriculture". For an outsider to get the number right was a great achievement.

The Approach's severe indictment of public sector research, while factually correct shows the policy maker's ideological blind spots. The belief that the private sector left to itself will solve the research gap in dryland areas and for a rapidly diversifying agriculture is touching but misplaced in terms of a reading of experience. The rural-urban continuum has another approach. It wants PPPs and goes back to the hybrid paddy experience which was a PPP, but led strategically by the ICAR. The failure now is that the ICAR is not even mandated to play a strategically leading role.

I discovered to my horror that we still don't have a road map for example for pulses to reach the average yield levels of Canada or Australia of 20 qtls/hectare plus. Back of envelope calculations show that when the ICAR builds up such a road map it may cost us more than three thousand crores of rupees to get going in a five year strategy and that needs a PPP, but not the way the Approach wants it, for the private sector will not do it, left to the market the way the planners want.

But first the happy news. The Planning Commission has declared that "it is necessary to remain abreast with latest advances in bio-technology", I hope putting at rest the brinjal episode. Now more is needed which they don't say. Given the long-term nature of the problem and the fact that large investment is needed to develop new molecules, a degree of regulation will be needed. Investors need a reasonable assurance of returns or they will not commit financial and, more importantly, experienced managerial and technical resources. For pulses itself for example, the research plan will cost hundreds of crores of rupees, if the experience of hybrid paddy is any indication. Such PPP projects will need public resource commitments in terms of meeting the so-called viability gaps. Also, public-sector involvement is essential for sustainability and environmental-safety aspects. A Central organisation working on what are called long-range, marginal cost principles, which have been advocated for power projects, for example, could work out fair pricing solutions. Anybody doing better than the average efficiency cost estimates, giving a fair rate of return, would keep the profits. It has been demonstrated time and again that the nation gains in such strategies. For example, pricing strategies which rely on group efficiency cost norms have given very powerful returns in terms of energy savings in the nitrogenous fertiliser industry and after eight years of discussion, it is reported that a committee under a planning commission member is suggesting this approach, which was the basis of pricing which a committee that I chaired had recommended many years ago.

The planners say that "farmers suffer even in years of a good harvest, since they are not able to get good price realisation. The obvious solution is for these farmers to aggregate their produce and reach bigger markets… Alternative models based on the idea of Producers' Companies and Commodity Interest Groups are now beginning to take off". But there is no overarching strategy for this as we saw.

For infrastructure having missed the emerging markets the Approach Paper is terribly weak. "Road connectivity, development of horticulture, dairying and other animal husbandry and expansion of cash crops, provide the necessary wherewithal for greater market access of the farm sector. This is particularly important for the segment of "high value" agriculture, where the demand pressures are going to be most intense in the coming years, and major investments are needed in the development of efficient value chains to save on high wastages and intermediation costs. This is logically the domain of the private sector".

For the planners to miss out that infrastructure for a diversifying agriculture is a planning task and even PPPs are difficult in small towns because they don't have the

comfort as CRISIL brings out is sad. So in spite of all the good words there is no strategy in the Approach Paper on widespread agricultural growth.

The scholarly community must build it. Thank you. Jai Hind.

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