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Focus on plan implementation

VOL. 29 NO. 17

YOJANA

SEPTEMBER 16—30, 1985 RUPEES 1.50

Dumping hazards on the weak !

NEXT ISSUE

Spotlight on IRDP

Boosting handloom production !

VARIOUS STEPS have been taken by the Government to strengthen the handloom sector in the country. For the protection of the handloom sector a separate legislation entitled "Handlooms (Reservation of Articles for Production) Act, 1985" has already been enacted. Besides, welfare measures for the handloom weavers like Thrift Fund and Workshed-cum-Housing Schemes have been announced. The production of janata cloth in the handloom sector has been augmented by providing additional target of 50 million square metres for the year 1985-86.

In the new Textile Policy announced in June, 1985 greater emphasis has been laid on the modernisation of looms and adequate arrangements for ensuring swift and smooth transfer of technology from the research institutions. Special efforts would also be made to ensure adequate availability of raw materials at reasonable prices to the handloom weavers through the operations of National Handloom Development Corporation.

The National Handloom Development Corporation has already opened yarn depots at Guwahati and Bihar-Sharif. The Corporation is also supplying yarn directly to the State handloom agencies in the States of Kerala, Rajasthan, Madhya Pradesh and the Union Territory of Pondicherry. The Corporation is working out a scheme to supply yarn to handloom weavers at reasonable prices. □

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Dhruva, another milestone in self-reliance

—Rajendra Prabhu

Dhruva, the sixth and the largest research reactor at Bhaba Atomic Research Centre, Bombay, became critical on August 8, 1985. One of the world's largest reactors of its kind, Dhruva was entirely designed by the scientists of BARC. It is a 100 MW reactor which will not generate electricity, but will only help our scientists to build better nuclear power reactors in future. Mr. Prabhu gives an interesting account of how the reacter came into being and what it seeks to achieve.

ALFRED NOBEL, the inventor of dynamite, is known to have died an unhappy man. He saw his wonderful invention being used not in the service of man as he wanted it to be. Dynamite was being used for purposes of war. The power of the atom today replaces dynamite in this respect. It has all the potential to destroy the world twice or thrice over. It has all the power to make this world a better place to live in. It is our choice what we make of it.

How it will work?

What the atom can do for a better future for us tomorrow, has been demonstrated to us time and again right in our own country. We have nuclear power stations that use a few tonnes of uranium to generate enormous power that would have needed million tonnes of coal. Take the Madras Atomic Power Project at Kalpakkam in Tamil Nadu. Its two reactors will together generate heat enough to produce 470 MW of power. As against some 40 tonnes of fuel needed to run these reactors, a coal-fired power station of this magnitude would have required several thousand tonnes of coal to be hauled all the way from Bihar or Andhra over thousand and odd kilometres day after day. From the used uranium in this reactor we can separate plutonium. A mixture of this plutonium and spent uranium could again be used in what is called a fast breeder reactor as a fuel. And that is not the end either. Because this type of breeder reactors would produce more of plutonium than is put in, we have the phenomenon of a power house which generates more fuel than it uses. From there, a third stage could also be seen. In this third stage India's rich deposits of thorium could be used in the fast breeder to produce yet another uranium based fuel for use in the third generation reactor. In this way all that we would need for taking care of our future electricity needs would be a few thousand tonnes of uranium and thorium. This would suffice, theoretically at least, for the next 100 years or more.

Sometimes what appear as simple propositions are the most difficult to be put into practice. Learning to generate power from the atom is one such. The temperatures you encounter are very high. The risk to human live and enviornment are also high so that most stringent safety measures are needed. The atom, like many other things in life, is a good slave but a bad master. To tame it would require a whole lot of skills in new materials, design, engineering, running of plants, disposal of waste, maintenance and so on. Research reactors are therefore set up to learn the skills and continually update them. The first research reactor Cyrus was set up 25 years ago. It provided the country's nuclear scientists with the necessary tool for studying the atom and also obtain several byproducts like nuclear isotopes which have numerous uses that we will discuss later.

For future expertise

The latest in this series of nuclear research reactors, went critical on August 8, 1985. The scientists of the

Bhabha Atomic Research Centre at Trombay in Bombay, where the reactor is situated, rightly named it "Dhruva" the lodestar. It is the sixth and the largest research reactor at BARC. For many years to come, this research reactor would provide us the guidance in our peaceful nuclear programme to harness the power of the atom in the the service of man. The scientists of the BARC told me with a lot of pride : "We are excited about it". What is all this excitement about ? Because, here is a new research tool for them that will help them build better nuclear power reactors in future, learn more about how the atom behaves when it splits generating heat and radiation and incidentally provide a whole new range of radioactive isotopes for use in various areas of human benefit. Many of these isotopes like iodine-125 are imported. Now these would be locally made.

Tremendous research value !

Dhruva is a 100MW reactor. It is one of the world's largest research reactors entirely designed by the scientists of the Bhabha Atomic Research Centre. The work on it started in 1973. Compared to Cyrus, Dhruva is two and a half times in size. But the comparison should end there. Dhruva is more versatile than Cyrus. Its high neutron flux which is twice that of Cyrus would enable several studies in neutron action, in the way a fissile atom behaves when bombarded by a shower of neutrons and so on. Dhruva would also enable the BARC scientists to carry out experiments that would give them a greater insight into nuclear physics. This is an insight that they need as the nuclear energy programme proceeds from the standard 235 MW reactor to 500 MW reactors and from there to fast breeder reactors and also as it begins to use new fuels. Dhruva has also yet another facility. That is, it could experiment with different materials meant to go in nuclear reactors. Scientists could, by using these materials within the Dhruva reactor, find out how they behave under conditions of radioactive pressure and heat. This intimate knowledge of behaviour of materials that go into reactor body and equipment is necessary to improve designs, make reactors more efficient and much more safe than they are today. It is necessary to recall here that we, in this country, can be proud of the fact that our scientists and engineers today can design, fabricate the entire range of equipment, instal and run 235 MW reactors, a capacity very few countries in the world have. By developing this capacity the hard way we have released ourselves from any need to surrender to international lobbies and pressure groups which dictate their terms for the supply of the know-how or materials or equipment for nuclear reactors. For this the country is indebted to the vision of Nehru and Bhabha. Dhruva would be yet another big step taken in improving and broadening that self-reliance.

The ultimate benefits

It would necessarily be many years and many steps before we perfect the science and art of coaxing the atom to yield all its secrets for human welfare. But already there is a body of knowledge and competence which has begun to affect our lives. We have already looked at the power scenario and what the atom could do in giving modern day version of "akshyapatra" of fuel to run the reactors. Nuclear isotopes are slowly but surely changing the medical science. Several types of scanning devices are able to tell more accurately and with greater speed what is wrong with our body and our metabolism. These devices use minute quantity of nuclear isotopes which are carefully made to measure in the research reactors like Dhruva. Nuclear isotopes are also having increasing application in agriculture. They help to select the right mutant for our high yielding seeds programmes. They help to give us a better insight into how plant nutrients work and thereby help us to know what fertiliser to use and when and how much. In post harvest technology, nuclear isotopes play an important role. For instance, you have the phenomenon of potato glut every season. It is simply not possible to keep them in the cold storage for months. Nuclear irradiation by preventing the biological decay or transformation of the potato protects the potato harvest and enables the potato farmer to wait till he gets a better price. True, all these techniques have not yet been accepted internationally but slowly prejudices and fears about them are giving way to facts that are incontrovertible. They will thus become more widely acceptable. Let us hope in future, the farmer would not have to fear that his grain and vegetable would be destroyed by moisture and worms. The atom is thus coming more and more into our daily lives in farms, in factories where it will tell how structures behave under stress, in medicine by helping to tell what is wrong with our system and so on. Behind all this will be the unseen hands and sweat of our nuclear scientists with their new and versatile research tools like the new reactor called Dhruva. □

(Courtesy : All India Radio)

Shifting of industries to improve environment

IT IS THE endeavour of Government to shift as many industries|godowns from residential areas of big cities to industrial areas for better environmental aspects and in order to give clean atmosphere.

To encourage industries to shift from urban areas and as a measure of decongesting the overcrowded cities and for reducing pollution, capital gains arising from transfer of buildings or lands used for the purpose of business are exempt from tax if these are used for acquiring lands for constructing buildings for the purpose of business at the new place. From the financial year 1983-84 this exemption has been further extended to capital gains arising from transfer of machinery and plant also. □

This implementation game!

P. K. Doraiswamy

Planning is easy but implementation is not so. The author explains that every government project goes through five different stages : initial euphoria, disillusion, panic, search for scapegoats and praise for those who raised objections initially. He suggests the way out of this vicious circle.

"WAR", said Napoleon, "is not difficult. It is the waging of it that is difficult." It is all right to say, in true Bhagavat Gita style, that a sincere effort is a success in itself and that the fruits of one's action lie with the Lord. But one cannot feed people or clothe them with mere sincerity. Every product or service we consume is the result of organised effort, the result of implementation of some plan or project. Similarly planning is not difficult, difficulties start with implementation.

Though implementation is a recognised weak-spot in administration, particularly public administration, the available literature and so called project management concentrates mostly on the application of formal techniques of quantitative monitoring of physical resources such as PERT (Project Evaluation and review Techniques), CPM (Critical Path Method), RAMPS (Resource Allocation and Multi-project Scheduling), SPAR (Scheduling Programme for Allocating Resources), LOB (Line of Balance), PPB (Planning, Programming, Budgeting), etc. It is almost as if people believe that, once a blue-print is prepared, resources required are calculated and allotted, the whole monitoring put on a computer and a contract awarded, the blue-print is bound to transform itself into a three-dimensional reality within a reasonable time. Apart from some reference to metrix, cell-type and link-pin types of organisations, the traditional literature hardly does justice to the complex human dynamics involved in implementation which, in practice, is really something of a 'game' in a psychological sense. A game implies not only an overall frame-work of rules within which it is played but also, within this framework, a certain amount of manoeuvring, rivalry, bargaining and compromising among the players. This article proposes to comment on some of these aspects of the 'implementation game'. In other words, this article examines not project management so much as project behaviour, particularly government projects.

Hidden hand

The first aspect is what may be called the need for an Inspiring Myth about the benefits of large, new projects in a developing country. In an under-developed country not accustomed to taking up new, complicated projects involving technological and economic risks and uncertainies, the initial inertia and aversion to risk-taking can be overcome only by generating a general, non-specific belief on the efficacy of starting new projects. This is usually done by administrators and technologists joining together and making it appear that :

(i) most projects technologies found in developed countries are easily transferable

(ii) the benefits easily exceed the costs

(iii) the time needed for completion has to be short.

While it is easy to criticise this approach as shoddy at best and dishonest at worst, many scholars of development economics feel that initially such a myth is essential to get things started and that, after gaining sufficient momentum and understanding, such apprai-

sals can always be made more rigorous. This gimmick has been used in a variety of projects right from the days of Sri Arthur Cotton's Godavary Barrage (which, in retrospect, is considered a boon to the area) up to the days of the British-French collaboration on the Concorde (which is now generally accepted as a classic planning disaster). The Invisible Hand of private enterprise apparently has its counterpart in the Hiding Hand of public enterprise !

Populist decisions

The above Inspiring Myth gets re-inforced by the preference of all politicians for new projects over the completion of old, on-going projects. (In addition to the traditional expressions such as site-bound projects and foot-loose projects, a new term in vogue is a "Minister-bound" project.) Democratic Governments do not get as much political mileage out of completing| expediting projects sanctioned by their predecessors as in sanctioning new projects. There may even be a vested political interest in delaying on-going projects to show their choice to be wrong.

While a political government is thus ever eager and totally committed to announce new projects, paradoxically, its commitment to any single project is never total. A government's concern, however genuine, keeps flitting from one new project to another or from one old project to another depending on where the greater crisis is. Many an administrator makes the mistake of naively assuming that merely because a Chief Minister has personally suggested or announced a project, the project would automatically receive adequate and continuous support from all wings of the government. He is somewhat unprepared for the subsequent problems of integration and coordination which sometimes seem to take more of his time than actual project construction.

Lack of clarity

Most governments overestimate their resources and capability (due to ignorance, inexperience or expediency) and are often faced with the problem of rationing out available resources to the various projects under implementation. Given the realities of inflation, the government has to optimise the over-all economic and political consequences of inflation by expediting some projects and deliberately going slow with others. This would create implementation problems for individual project managers all of whom generally try to speed up their respective projects and do not know how their own projects fit into the government's overall scheme of things. Usually, project managers are never kept informed in time of this overall picture and are caught unprepared for making the necessary adjustments.

Governments are notorious for the lack of clarity in their goals. While this criticism makes much managerial sense, politically any government which defines its goals too precisely is a hostage in the hands of the Opposition. In one of the States, a PERT chart was introduced for the first time in a major irrigation project and unfortunately, for various reasons, this project turned out to be one of the most delayed projects in the country. At every session of the Legislature and meetings of various non-officials, there was always a reference to the original PERT chart and comments on the government's inability to adhere to the time-schedule. The Chief Minister, normally a sober and confident person, remarked in sheer exasperation, "We have built so many projects in the past without any PERT chart. Why did you officers have to introduce it now ?". A certain vagueness in the goals is part of the strategy of political survival as it not only prevents the Opposition from pinning you down when shortfalls occur but also gives scope for modifying the goals mid-way through implementation if political imperatives so dictate.

We are all familiar with mid-stream changes in the major parameters of projects like basic production capacity, technology to be used, target groups to be benefited, etc. In addition to all these, no government generally likes to make it totally clear whether a particular project is entirely site-bound or foot-loose lest every region should claim the project. The implementation problems which project administrators face as a consequence can easily be imagined.

We now come to some aspects of the dynamics of actual project implementation.

Once implementation starts, government, which hitherto appeared to be a single organisation with a single will, suddenly turns out to be several sub-organisations with different sub-wills. The project administrator, important and much sought-after immediately after the announcement of the project, suddenly finds himself hopelessly dependent for implementation on many others over whom he has little direct control. (Apart from his own official colleagues in other departments with whom he is supposed to 'coordinate', this also happens with a contractor who is at his mercy till the contract is awarded and gains the upper hand once the work is started). He realises that

(i) the initial non-specific, enthusiastic consensus among various government agencies on the project soon dissolves into specific, often violent, disagreements on details of implementation and the authority of one department vis-a-vis another ;

(ii) each participant agency has a different time and priority orientation towards the project in the context of its other commitments ;

(iii) the success|failure of the project does not have the same, or equally important, consequences for other agencies as it has for the project administrator himself ;

(iv) because of (iii) above, collective action learning never takes place and each failure of coordination only further reinforces the departmental bias of each ageney towards the others (e.g. one failure of coordination between two departments, instead of making them realise and avoid this in future, only makes them more hostile to each other).

(v) no one knows what "coordination" means : whether it means bargaining, coercing, over-ruling, saving faces, compromising or achieving consensus, with the result that everyone clamours for coordination—on his own terms !

(vi) in his own interest, "coordinating" with other agencies is necessary as every additional signature on file represents one more hostage against retribution if anything goes wrong;

(vii) in between two major decision points in project implementation, there are diversion points which can cause delay (example : strike by labour, legal disputes with contractors, routine objections from Statutory authorities, etc.).

(viii) as long as a very large number of agencies and decision points are involved in implementation, even a minimal or "reasonable" delay at each point would cumulatively add up to a significant delay in implementation. (In fact, it can be worked out mathematically that if there are 70 sequential decision points in a project, minimal|minor|moderate delays represent 1 week|3 weeks| 6 weeks respectively and these 3 types of delays are equally distributed over the 70 decision points, the total delay would still be 233 1|3 weeks or 4 1|2 years ! Similarly, even if the probability of all the concerned agencies agreeing on each decision point is as high as 0.95, the cumulative probability after just 14 decision points becomes less than 0.5, i.e. as good as tossing a coin !).

(ix) though all commitments|contracts are neatly tied up on paper, in practice, government can never act quickly enough to "capture" the essence of such commitments|contracts and enforce them on the parties.

The above analysis shows the complexity of collective action in implementing any project, particularly those politically controlled. While, in theory, a project organisation is supposed to be a "fighting formation" (to borrow a military expression) and "coordination" is supposed to provide unified leadership, in actual practice implementation consists of assembling diverse programme elements most of whom are largely independent of each other and a lot of energy goes into avoiding responsibility, scrutiny and blame. In other words, the implementation game is predominantly "defensive" in character. Obviously, there can be no "formula solution" to such a problem nor will graphic, quantitative or computerised techniques alone suffice. Certain non-conventional approaches, often bordering on manipulation, have been used effectively. For example, in order to avoid a political controversy (and consequential delay) on the location of a major project, a foot-loose project may sometimes be presented as site-bound or technologically too sophisticated to be explained in detail. Similarly, to force the agencies involved to submit to coordination, the beneficiaries of a project have been deliberately organised and encouraged to bring political pressure for the early completion of a project. An open, political commitment to inaugurate a project on a date which has a great symbolic, emotional significance often compels bureaucracy to work together more effectively. Of course, such unorthodox steps for the early completion of projects have sometimes led to the substitution of quantity for quality or a subtle, covert modification in the scope of the project. There are also cases of incomplete projects having been inaugurated and completed later by "installing balancing equipment". To the purist administrator, these may appear to be cheap, crude or even below-the-belt methods but in real-world management-these are perhaps required for supplementing text-book techniques.

Suggestions

In addition to the above, some other steps that could be considered to improve implementation efficiency are :—

(i) possible implementation problems may be considered by the policy-makers themselves instead of these being considered a hindrance to quick policy-making and being left to be sorted out by lower levels of administration after implementation starts;

(ii) wherever possible, the project formulating agency may be made responsible for implementation also (example : In irrigation projects, the investigation divisions often give a wrong soil profile based on which designs are prepared only to be drastically modified during execution by the implementing divisions;

(iii) the number of independent participating agencies and sequential decision points may be minimised so that the total cumulative delay may be minimised;

(iv) a "fixer" could be identified who 'knows', 'cares' and 'can'; i.e. who has the knowledge, energy and resources to remove bottlenecks when normal coordination fails. (This could be anyone from a local MLA, a Minister's PA or the Chief Minister himself.)

(*Continued on page* 12)

What lacks in block level planning !

Dr. Ram Krishan

Why the objectives of the planning remain unfulfilled with unemployment, poverty and imbalances continuing unabated? Is it because of lacunae in the planning process? Or is it due to non-involvement of masses, bureaucratic way of planning and the influence of the vested interests to prevent any serious attempt at radical transformation of the poor? The author feels that a sound planning is needed to secure proper implementation of schemes for specific areas and blocks.

THE PLANNING PROCESS thoughtfully initiated in the early years of Independence has done perceptible good in the direction of economic development of the country but it could not be denied that the basic goal of planning still remains distant. This could be attributed to a number of factors like various conceptual gaps in formulating programme proposals and failures in implementation in various spheres of economic and other activities, especially those meant to raise the social-economic level of the weakest sections who form the bulk of our population.

There is no denying the fact that most of the Schemes launched by Government for the benefit of the poor have failed to reach the targeted category of people. The result is, widening of the wedge between the poor and the rich and increase in the number of persons below the poverty line. The green revolution is a striking example of the anomaly wherein the increase achieved in production was cornered by a handful of powerful rural holders having comparatively large holdings.

The desire for involving the masses in the process of planning has also remained largely unfulfilled because of our bureaucratic way of planning and the influence of the vested interests which lay in maintaining the status quo and preventing any serious attempt at radical transformation of the weak and the poor.

In the successive Five-year Plans in the past, the aim of planning has always been to focus on the following main objectives : (1) Reducing or removal of unemployment, (2) A significant rise in the standard of living of the people specially those below the poverty line through increase in per capita income, and (3) Reducing socio-economic imbalances among various areas and people and ensuring distributive justice. The idea was to move the society progressively towards equality and social justice.

Even in the Seventh Five-year Plan, the main objectives are almost the same. It would, therefore, be proper to find out as to why the objectives are not being fulfilled and unemployment, poverty and imbalances still continue. In the present article, an attempt has been made to point out and discuss the lacunae in the past planning process so that foundation of sound planning in future be properly laid to ensure fulfilment of the main objectives specially in respect of planning for specific areas and blocks.

Lacunae

There are several lacunae in block level planning. Major ones are : absence of spatial planning, rigid budget pattern, remote and delayed decisions, stress on staff schemes, employment of unsuitable and unwilling staff, non-synchronization of plan objectives with programes, absence of land-use planning neglect of basic problems of the people areas and of

cottage industries, absence of professional surveys, absence of healthy institutions, state policies not commensurate with peoples' needs and aspirations, lack of proper reviews, unchecked population growth and rampant corruption. Of these, the first one has been described in the first part of this article and the remaining ones in the second part of the article.

Spatial planning

Spatial planning for infrastructural development is essential for a balanced growth of people and areas. In absence of this, the growth processes do not take roots.

Spatial planning, according to the report of the working group on block level planning set up by the Planning Commission (1978) implies systematic efforts to locate facilities (roads, schools, factories, housing, etc.) in relation to human settlements where all people can use them to maximum advantage. If this is not done conscientiously, infrastructural investments of sectoral programmes would be made in haphazard locations and they may not converge in desirable combinations at the most optimal locations. Such convergence can affect large economies in movements of men and materials and better utilisation of facilities. The advantage of such a convergence is that farmers can get all their things done at one location. If locational planning is not intersectorally integrated and not done with social justice in view, there would be unequal growth of areas and viability of projects in many cases would decrease.

Spatial planning is a comprehensive exercise which deals with all spatial manifestations and resultant outcome of all human activities. It is, therefore, concerned with all types of activities of people which are relevant for planning the levels of economic and social activities in a particular region. Spatial planning must therefore: (1) guide the process of social development through a locational blue print, (2) ensure that the objective of distributive justice is realised through an access to consumption and production facilities for all sections specially the weaker sections of society, and (3) it must initiate a process of participatory planning through an integrated Institutional framework reducing progressively the urban-rural dichotomy.

Foremost requirements in spatial planning is to decide upon the lowest unit of viable administration.

The administrative tiers in each State of the country are more or less the same but with different names. Planning for institutions and infrastructure to be created will be different for all levels. For some items like fertilizer factories, steel plants, manufacture of heavy machines and defence equipment, construction of big irrigation dams, inter-State and intracountry works, etc. planning has to be finalised at national level, taking regional needs and suitabilities into consideration. At the State level, overall needs of the State, such as for cement, textiles, sugar, paper, etc. would be the consideration. At the district level, the district needs would get priority and so on. More down below, namely the blocks, Nayaya Panchayats and the villages it has to be a more specific area as well as people-oriented. For the poor, it is generally the development of last two tiers in which they are most interested, because those would benefit them the most, both individually as well as collectively. As the tiers rise up, their direct interest becomes less and less as the poor in the villages are more interested in raising their income, they need a relevant socio-economic structure close to them.

Locational decision

The activities which would require locational decisions in the rural areas of the counrty are suggested in Annexure 'A'.

The list of activities in this annexure is tentative and will differ from area to area. Systematic planning for deciding upon the locations, would require determining the norms for populations threshold, and distant standards and existing facilities on the basis of which plan would have to be prepared for each area. For spatial planning, a cluster of eight to ten villages should be the lowest unit followed by the block, district, region, State and conutry. It would be in the interest of organised planning if a central village out of the cluster of eight or ten villages (in U.P. it would be Nyaya Panchayat headquarters) is selected, for developing as a Rural Growth Centre, which it would be better to call a Kisan Nagar. The infrastructure needs of this Kisan Nagar have to be finalised on the basis of requirements of the area. Similarly, for the block, district and State levels for having a rural growth centre, a land area of about four to six hectares would be needed. It may have to be acquired or donated by the village. If consolidation of holding operations have not been completed, the required land may be set apart from the village pool. These rural growth centres should also have enough land for housing colonies. In these colonies, preference for allotment of plots would be given to only those having kachha houses or no house. Only persons residing in the cluster of eight or ten villages should be allotted land in this colony. The step is being suggested so that rich persons of the area may not get a large number of plots allotted to them. If it is required to allot plots to rich persons of the area, they may be charged a higher price.

Before planning for location of Kisan Nagar, an inventory of all the existing infrastructure|facilities|institutions|services would have to be prepared. These then would be mapped and their spatial reach to the village settlement identified. On the basis of realistic norms, thereafter, spatial gaps should then

be identified and suitable plan drawn up for execution.

Viability of Kisan Nagar

Each Kisan Nagar should be connected by a road to block, tehsil and district headquarters. Buses should ply from here to take passengers to the above headquarters in the morning and bring them back in the evening.

Weekly and bi-weekly markets should be organised in each Kisan Nagar wherein farmers bring their produce for sale and go back with their requirements of consumable commodities. They could also do their banking on these days. The Kisan Nagar may itself serve as a centralised marketing centre for a cluster of villages.

A cattle market should also be organised in each Kisan Nagar and if it is uneconomical to organise a cattle market in each Kisan Nagar, it may be organised for two, three or more Kisan Nagars. The above Kisan Nagars should first be established in backward and far off inaccessible areas as well as the districts with big industrially developed towns like Kanpur, Jaipur, Bhopal, Varanasi with a view to checking rural exodus to these industrial cities.

Location of Kisan Nagar should not be decided on political grounds but on actual situation and requirements of the area. As users of facilities, people should be consulted about the location, nature and quality of infrastructural facilities and social services as they are in the best position to know their requirements and their logistic convenience. In consultation with the people the planner has, however, to differentiate between vested interests of some people and real needs.

As various institutions would belong to different departments and organisations, it would be advisable for the Area Development Departments of the State Governments to decide upon the norms for threshold population and distance standards through a collective decision of the concerned departments and organisations.

It should be better if regional Corporations which work under the Area Development Departments in each State are made responsible for execution of this scheme and management of Kisan Nagars. Various institutions in the Kisan Nagars would, however, be run by respective departments or organisations concerned. Some statutory rules would have to be framed for continued maintenance and extension of these townships which would slowly develop into fledged towns.

In brief, the spatial planning has to be done in the following stages :

Preparation of existing inventory of facilities| institutions|services in the area and population and village settlements served by them at present.

Selection of viable micro-regions or units for spatial planning. They could be administrative units like Nyaya Panchayat or others based on Geographical considerations. Thus, such micro-units will be units in between the block and the villages.

If for spatial planning, boundaries of existing micro-administartive units require changes, it should be done right at the start.

Deciding upon the new supply and service facilities organisations and other institutions needed, keeping in view the existing facilities, resources, population and distance standards and locating them by converging and integrating the various public and private infrastructures at one location.

Developing of micro-area as a viable socio-economic unit utilising integrated multi-sectoral approach with multi-level spatial planning with a view to providing large scale employment within the area itself, to ensuring conservation of resources, equitable distribution of benefits and growth with social justice, to removing poverty through better management and mobilization of local talents, skills and resources and stimulating an organised community effort for changing attitudes and driving out stagnation, lethargy and fatalism from their minds.

Annexure A

A. Commercial Infrastructure—supply and service

1. Regulated market or Sub-markets
2. Cold storage
3. Workshop for repair of machines
4. Custom hiring service for mechanised tools
5. Sale depot for fertilisers, pesticides and seeds
6. Television, Radio and Watch repair service
7. Milk collecting and Chilling Centre
8. Veterinary hospital and stockmen Centres
9. A.I. facilities and bull Centres
10. Branch of Land Development Bank and other Banks
11. Warehousing storage services
12. Processing facilities
13. Irrigation services
14. Transport facilities for bringing inputs and taking out farm outputs
15. Cane purchase Centre
16. Shopping Centre
17. Diesel Pump
18. Raw material depot for coal, cement, iron steel, building and scarce materials for supply to rural artisans, industrial units besides house building industry in the rural areas
19. Training-cum-production Centre for fruits and vegetable processing and rural craft

20. Horti culture nursery

(B) Social Infrastrusture (according to requirement)

(i) *Education*
- Primary School
- Junior High School
- High School
- Inter College
- Degree College
- Technical Education College/Institute

(ii) *Communications*
- Road
- Culverts
- Bridges, if any
- Bus station
- Post Office
- Telephone & Telegraph

(iii) *Health & Medical*
- Public Health Centre
- Maternity Centre
- Midwife Centre
- Safe drinking water
- Homoeopathic Dispensary
- Ayurvedic Dispensary
- Unani Dispensary

(iv) *Housing Colonies*

(v) *Power Lines*

(vi) *Rural Cinema*

(C) Organisations

Economic Organisation
- Location of office of village level functionaries
- Community Hall
- Co-operative Societies/Industrial Societies
- Cane Purchase Centre
- Bank Branches

Social Organisations
- Youth Clubs
- Mahila Clubs
- Police Chauki

(D) Projects

Productive Key and Supporting Projects as indentified for the area such as
- Brick Kiln
- Lime Kiln
- Spinning Mill
- Paddy and Pulse Processing Units
- Sugar Mill
- Cold Storage
- Cottage Industries Units
- Rural Markets and Supply Centres for the local trades

(To be continued)

(continued from page 8)

"Never has there been an event with more serious consequences, longer in gestation and less foreseen", said Tocqueville about the French Revolution. How aptly it describes a government project under implementation ! Watching the different government agencies interacting with each other, one is reminded of the words of Hobbes :

> "Bellum omnium contra omnes (war of all against all)".

It is even said that every government project goes through the following stages :

(i) initial euphoria

(ii) disillusion

(iii) panic

(iv) search for scapegoats

(v) praise for those who objected initially.

But it is well to remember that a project does not implement itself and odds in this world are stacked heavily against things happening the way we want. In fact, the patron saint of all the government projects seems to be Murphy, the author of the famous Murphy's Law : "If something can go wrong, it almost certainly will". Project behaviour and implementation dynamics, therefore, deserve a more detailed study by management experts and practising managers, particularly in the public sector.

Small sector in national economy

IN EARLY 50's, the small scale sector started modestly with the manufacture of simple consumer goods only but has now made considerable progress in terms of the areas of manufacture and production. The estimated value of production in small scale industries (at 1979-80 prices) during 1983-84, was Rs. 30,415 crore as compared to 27,700 crore during 1982-83, signifying an increase of 9.8 per cent. Employment in this sector also increased to a little over 84 lakh persons in 1983-84 from 79 lakhs in 1982-83 an increase of over 6 per cent.

The share of small scale sector in India's total production is very significant at almost 25 per cent. Only 6 per cent of the total production of this sector is exported. Thus its latent potential remains to be exploited.

The Government is keen to help the small and medium industry in its development. New Import and Export Policy announced in April, 1985 contains a number of measures which would assist the development and growth of small and medium industry in the country. □

Do our plans need structural changes?

S. K. Bhattacharyya

The author here calls for the formulation of Five Year Plans on a more realistic basis. He points out that progress in implementation of IRDP and other poverty alleviation measures show that the development has been very slow and like dreams targets remain unfulfilled. He cautions that the next two decades would be a period of trial as provision of finances and fiscal management would be an uphill task.

JAWAHARLAL NEHRU, the chief architect of the plan frame of free India, made a rather paradoxical statement of Indian economic life when he said, "India is a rich country inhabited by poor people". In 1951 we had to deal with a population of 361 millions, while we are now required to deal with the population of 684 millions. In the modern theory of demographic transition, increase in population is classified into the following three stages

(i) Stable population growth;

(ii) Rapid population growth; and

(iii) Stationary population growth.

While developed countries have reached the third stage after crossing the first two stages, it has not been possible for cost of the underdeveloped countries to cross the second stage. India in whatever name we may describe her (under-developed or developing) is still in the second stage. Her population shows rapid growth as per census statistics upto 1981, but from the following comparative statistics of 1971 of per capita income of four countries, it appears that we are still a poor country

		(In terms of Rupees)
1.	USA	36,884
2.	West Germany	25,544
3.	England	17,992
4.	India	992

We have spent a lot of money for the economic development of our teeming millions (which has been the goal of our economic planning). The following statistics of total outlay during the last six plan periods will reveal that we increased our outlay substantially keeping in view the increasing trend of our population growth:

Plan period	(Total outlay in millions of rupees) (Public Sector)	(Private Sector)
1st Plan (1951-56)	19600	18000
2nd Plan (1956-61)	46000	31000
3rd Plan (1961-66)	63000	41000
Annual Plans (1966-69)	67560	—
Fourth Plan (1969-74)	167740	89800
Fifth Plan (1974-79)	372500	161610
Sixth Plan (1980-85)	693800	468600

But it cannot be said that the above outlays have been result-oriented. Food, clothing and housing are the three basic needs of our people. It is true that there has been no famine in recent years. It is also true that we do not come across naked people nowa-days. But is it not equally true that mal-nutrition

is rampant and thousands die every year in winter due to lack of warm clothings? As regards housings a survey made by Dr. S. L. Hendre, 30 per cent i.e., 270 million Indians are homeless. Is this not a deplorable state of affairs after three decades of planning? We wanted to reduce the number of our countrymen below the poverty-line as per the following statistics. It is however, revealed that no significant progress has been achieved to the extent contemplated :

People below poverty line

	(In Millions) 1979-80	1984-85
People below the Poverty line in rural areas.	259.56 (50%)	166.02 (30%)
People below the Poverty line in urban areas.	57.28 (40%)	49.14 (30%)

And what is this poverty line? In 1977 the team experts appointed by our Planning Commission defined this line as "the midpoint of the per capita monthly expenditure of people having a daily calorie intake of 2400 per person in rural areas and 2100 in urban areas. In terms of 1979-80 prices, these midpoints are Rs. 76 and Rs. 88 respectively. Even we are able to bring down to such people to 30 per cent after over three decades of planning it would be no marvellous achievement because clothing and housing have not been properly accounted for in the above compilation of expenditure.

It appears that there are some defects in our plan frame and restructuring is necessary. In the report published by the World Bank in 1972 India's place in the developing countries is as low as 22nd. Our ex-Prime Minister admitted this deplorable state affairs as under— "To plan when population growth is unchecked is like building house where the ground is constantly flooded." Is the flood of population growth in India uncontrollable? It is really a serious issue, specially when we are having nearly 40 per cent of our people below the poverty line in whose case birth rate is exceptionally high.

Future economic development

We started our first plan in 1951. Opinions differ about the nature of economic development attempted through our previous plans. One opinion is, by now we are no longer an under-developed economy, notwithstanding our request for aid from I.M.F. and World Bank and that we are a developing economy. Prof. Nurkse, who studied under-developed economies in details is, however, hopeful about the transformation of an underdeveloped economy to a developing economy. He has nicely portrayed the features of a developing economy as under :

"Such an economy is characterised by increase in capital resources, improvement in the efficiency of labour, better organisation of production in all spheres, development of means of transport and communications, growth of banks and other financial institutions, urbanisation and a rise in the level of living, improvement in the standards of education and expectation of life, greater leisure and more recreational facilities and the widening of the mental horizon of the people. In short, economic development must break the poverty barrier or the vicious circle and bring into being a self-generating economy so that economic growth becomes self-sustained". If we labour hard and with foresight, would it not be possible to fulfil all the above conditions most of which will be fulfilled within the next decade and a half? If by AD 2000 we repay all our loans and are able to restore confidence in the mind of our people below the poverty line, we would be able to usher in a new era in which we may even find ourselves in a 'developed' condition instead of a "developing" one.

Doles, subsidies, no solution

The other view is, the picture is not so rosy. The progress in the implementation of our IRDP and other anti-poverty measures during the Sixth Plan has not been satisfactory so far. Dr. Bhabatosh Datta, one of the most eminent economists of our country, while reviewing our performance in respect of the sixth and previous five plans commented that the pace of development has been slow and we have not been able to reach our targets. Even our Planning Commission, the official body for the framing and implementation of our plans, have given a stricture on the extremely poor performance in this direction. The socio-economic milieu in the slums of our towns is no better than in our villages. More doles and subsidies would be no effective solutions of the problem. The acid test of a 'developed' economy is that it is of the self-generating type. We are contemplating an employment-oriented Seventh plan. We aimed at 8 per cent industrial growth rate for our 6th plan, but our performance could not exceed even 5 per cent so far. In the past we could not prepare our plans on realistic basis. It is imperative that our future plans are framed on more realistic basis and once we frame our plans, we have to labour hard to reach the targets by having regular reviews at the levels of States and the Centre. Dr. Nancy Berdsall of the World Bank, while addressing a seminar on the World Development Report 1984, has recently commented that India's population would increase substantially in absolute numbers. It is better that we pay heed to this note of warning.

Curbing population growth

Our Ford Foundation economists who made a detailed survey of our economic planning opined that soon after the year AD 2000 a second India will emerge because of India's population growth rate and unless the present strategy of planning is changed, the

expected massive increase in population which would swell to 100 crores would pave the way to disaster. Social justice is the crying need and it would be neces-sary to eliminate unemployment and poverty from the life of our teeming millions below the poverty line. 'Prosperity for all' should be the slogan. By ensuring proper redistribution of income in favour of the poor according to a properly phased programme it may be possible to have favourable effects of increased consumption on the part of those below the poverty line to have an overall increase in production, savings and investment.

Our expenditure on family planning has been increasing steadily since 1952. While family planning, by using contraceptive pills on a larger scale, will have to be continued during the next three decades, there is considerable force in the argument advanced by some economists that economic development for the downtrodden masses is the best contraceptive pill. For bringing about this economic development, it may even be necessary to change the present pattern of our mixed economy. The state may have to acquire the ownership of all important sectors of production and introduce more stringent measures for improving the efficiency of public sector enterprises.

Would it not be proper also to re-examine the administration of our Planning Commission, which was established 35 years ago? Should we make our Planning Commission an autonomous body or tighten up central control? The study team of the Administrative Reforms Commission set up sometime back pleaded forcefully for the involvement of our States in setting out targets and fixation of monitoring cells at regional and sub-regional levels in the states. Sarkaria Commission have recently opined that if all Central Cabinet Ministers are to be included in the Planning Commission, it is necessary that an equal number of State Ministers should also be co-opted, because the States are responsible for an equal proportion of our plan outlays. But if our Planning Commission is reconstituted in this fashion, will it not be an unwieldy body, incapable of taking quick decisions? Is it not enough that the Chief Ministers of States are associated with decision-making, leaving it for them to ensure implementation at their Cabinet levels? A rigid system of annual reviews and carry forwards from year to year during the five-year period may possibly be a workable solution of the Centre Vs. State controversy.

Funding the plans !

From data available, it appears that provision for funds for the Seventh Plan would be a headache for our Planning Commision. A huge amount of Rupees Forty Thousand Crore was shown as deficit in the original planning forecast papers, which has recently been brought down to ten thousand crore in the revised draft plan. According to the Planning Commission, it will not be difficult to have profit to the tune of Rupees thirty three crore from the State-owned undertakings in the public sector out of which it will be possible to cover the gap of Rupees Twenty Thousand Crore. In the original planning forecast papers, this profit was estimated at the much reduced figure of thirty thousand crore. As regards savings, our Planning Commission have framed their estimates on the increased rate of 26 per cent during the Seventh Plan period. According to them, this increased rate will materialize as a result of additional contributions to savings from our countrymen below the poverty line, who will rise above the line due to the implementation of our plan targets in this regard. Thirdly, the members of the Planning Commission are counting much on indirect taxes which generally provide 80 per cent of the total revenue and are of opinion that earnings from indirect taxes anticipated will facilitate provisions of funds use to the operation of the aforesaid three factors is not, however, shared by economists. According to the latter, provision of adequate funds for the Seventh Plan would be a Herculean job, because prospects of foreign aids on a massive scale are rather bleak and the anticipated profit from the State-owned enterprises may not materialise, unless these enterprises are radically modernised and their productivity is enhanced by ensuring much more efficient management than what are having at present. The apprehension is, the deficit gap would be covered through deficit finance, which will have inflationary effect of a severe type jeopardising the interests of the common man. The shape of things to come during the next plan period is, therefore, uncertain and we cannot visualise a rosy picture of our economy in the near future. The two decades would be a period of trial during which our planners have to be extracautious about the ways and means position of our next five year plans. The beginning of the Twenty-first Century may possibly be the take-off stage of our economic life which will make our plan self-generating. To ensure that we reach this take-off stage in due time, financial provision would be an uphill task during our 7th, 8th and 9th plan periods. While tapping different sources, we should try to avoid inflationary situations which are detrimental to the interests of our teeming millions. Then again, with regard to targets, physical output planning may be introduced simultaneously with monetary planning. Secondly, the new 20-point programme or similar other programmes of other parties which are now being used as political blue prints may be converted into planning documents with five-year physical targets. Last but not the least important would be debt-servicing planning with repayment and re-cycling of loans from IMF and foreign countries and involvement of the whole nation in raising funds for this purpose should be ensured by the planning authorities. □

Indian agriculture needs toning up !

Mohd. Talha

Our country has gained tremendous success in achieving self-sufficiency in foodgrains. Against this the growth of population continues to be still faster. The author feels that agricultural output can be further increased by bringing more area under cultivation, by improving productivity in terms of yield per-hectare and by extending irrigation facilities in the parched lands.

AGRICULTURE OCCUPIES a predominant position in the development process of Indian economy. Considering the importance of the same, Government has given priority to this sector in the development strategy. As a result, the Seventh Five Year Plan gives greater emphasis for accelerating the pace and development, taking steps to increase growth of agricultural production, to remove regional and cropping imbalances, to evolve of new varieties of seeds, to increase consumption of fertilisers, to expand irrigation facilities, to extend the supply of institutional credit, price support to farmers and so on. These measures, no doubt do have a favourable impact on the progress of agriculture and the country could be able to achieve self-sufficiency in food. Although there has been a significant improvement in the agricultural productivity and the yield per hectare has gone up, agriculture will continue to play an important role in the years to come.

In India, nearly seventy per cent of the total population depend upon agriculture for livelihood. There is no doubt that the country has recorded considerable progress in agriculture sector since the beginning of planned era. But the progress is not up to the mark. Table No. 1 shows the trends in foodgrains production in India.

Table No. 1
Trends in Foodgrains Production in India between 1950-51 to 1983-84.

Year	Area (million hectare)	Production (million tonnes)	Yield per hectare (Kgs./ hectare)
1950-51	97.32	55.05	566
1960-61	115.58	82.02	710
1970-71	124.32	108.42	872
1980-81	126.67	129.59	1,023
1982-83	123.32	128.35	1,041
1983-84	N.A.	150.60	N.A.
% inc./dec over 1950-51	26.7	173.5	79

Source :— State Bank of India Monthly Review, May 1984, p-222.

N.A.—Not Available.

Data given in Table 1 reveals that from 1950-51 to 1982-83, total output of foodgrains increased at the rate of 2.7 per cent per annum and this was largely due to rise in the productivity per hectare which went up by 1.9 per cent per annum. But on the other side total area under foodgrains showed a marginal increase of only 0.7 per cent per annum. Foodgrains constitute nearly 70 per cent of the total grossed cropped area in the country, though less than 30 per cent of the area under foodgrains is irrigated.

Kharif season (June—October) accounts for three-fifth of the foodgrains production and rabi season (October—May) constitutes the remaining two-fifth. Over 54 per cent of the value of agricultural output is contributed by foodgrains. Fertiliser consumption has also gone up from 1|2 kg. per hectare to 44.9 kgs. per hectare. Similarly, the acreage covered under high-yielding varieties of seeds accounts for 53 per cent of the total acreage under cereals. Total foodgrains production rose from 55 million tonnes in 1950-51 to 151.5 million tonnes in 1983-84, and was to be around 148.5-150.5 million tonnes in 1984-85. But the progress made on the agricultural front does not leave room for complacency.

Looking to the performance of the agricultural sector from a long-term angle, it is seen that the rate of growth of agricultural production has been falling in recent years. Similarly, the rate of growth of acreage under cultivation decreased from 1.5 per cent per annum between 1949-50 and 1964-65 to 0.4 per cent per annum between 1967-68 and 1983-84. In 1950-51 the rate of growth of agricultural production was 3.3 per cent and the same came down to 2.3 per cent in the mid-sixties.

With the application of the new technology in the form of improved varieties of seeds, increased use of fertilisers and other modern inputs, the rate of growth of foodgrains production potential went up, and as a result, the rate of growth reached to a level of 2.7 per cent in 1968-69. Since then it has again shown a gradual deceleration to 2.0 per cent by 1982-83. The annual increase in foodgrains production potential is below the growth rate of population (2.2 per cent per annum) during this period. Per capita foodgrains production appears to have been more or less stagnant in last few years.

It is matter of great concern that the annual rate of growth in agricultural production stood at 2.6 per cent which is slightly above the rate of growth of population at 2.2 per cent and one bad monsoon could upset the precarious balance. For this state of affairs, many causes are there. Firstly, institutional shortcomings, secondly, technical drawbacks and human factors etc. Thirdly, non-availability of good quality of seeds, manures, tools, etc. with which farmers undertake agricultural operations. Fourthly, regional as well as crop-wise imbalances in agricultural production are still persisting in the country. This can be seen from the data that the rise in foodgrains output from 1979-80 to 1983-84 was 41.8 million tonnes. Of this increase, over two-thirds came from the major producing States, namely, Uttar Pradesh, Punjab, Andhra Pradesh, Haryana, Maharashtra and Madhya Pradesh. Added to this nearly 9 per cent of total foodgrains is produced by Punjab alone, the share of which in the total population of the country comes to 2.4 per cent. This explains the large marketable surplus of foodgrains which Punjab has been contributing.

Yield per hectare in the traditional rice cultivating regions has lagged far behind and requires to be stepped up. Rice output in the Eastern States such as Orissa, Bihar and West Bengal accounted for 10.9 million tonnes in 1982-83, i.e., 23.5 per cent of the country's total rice output and 35.3 per cent of the total acreage under rice cultivation in the country.

Similarly, production also needs to be increased in the traditional rice-growing North-Eastern regions, which constitutes 8.2 per cent of total rice acreage and nearly 7 per cent of total rice production in the country. As compared to this, non-traditional rice-growing States namely, Punjab, Haryana, Uttar Pradesh, and Rajasthan accounted for nearly 24 per cent of total rice production and more than 18 per cent of total area under rice cultivation. Even in the case of wheat there has been wide regional desparities in productivity. In Punjab it is 3,007 kgs. In Haryana it is 2,526 kgs. Hence special attention need to be paid for increasing productivity in other wheat-growing States, particularly Madhya Pradesh (1,092 kgs.), Bihar (1,343 kgs.), Uttar Pradesh (1,860 kgs.) and Rajasthan (1,830 kgs.).

Cropping imbalance

Indian agricultural sector is also facing the problem of imbalances in the cropping pattern which can be observed from the fact that the share of wheat and rice in total foodgrains output went up from 53 per cent in 1950-51 to more than 69 per cent in 1983-84, while the share of coarse grains and pulses declined from 30.7 per cent in 1950-51 to 18.1 per cent and 8.3 per cent in 1983-84 respectively. Similarly, per capita availability of vegetable oil is nearly 6 kgs. per year, as compared to the world average of 13 kgs. a year. India will have to make efforts to double the production of oilseeds from the present level of about 13 million tonnes to 26 million tonnes. Therefore, oilseeds production will have to go up nearly 6 per cent per year as against the current annual growth rate of less than 2 per cent. Another instance of cropping imbalance is that of sugarcane, which has been showing wide cyclical fluctuations in the output, causing corresponding variations in the output and price of sugar and other sweetening agents. After two successive years of bumper sugar production at 84.3 lakh tonnes in 1981-82 and 82.3 lakh tonnes in 1982-83, sugar production in the country fell to 58.9 lakh tonnes in 1983-84 and is likely to be about 60 lakh tonnes in 1984-85.

Hence to achieve a balanced approach in regard to the cropping pattern, it is essential that an overall integrated price policy for all agricultural commodities should be evolved as an incentive to farmers. Though some short-term fluctuations will not cause

very wide movements in the output of various crops. Therefore, not only technological breakthrough is necessary to increase the yield of pulses, oilseeds and coarse grains, but there is also an urgent need to introduce an integrated price policy for agricultural commodities. In the absence of crop planning in the country, only such a policy will help to eliminate stagnation as also large fluctuations in the output of various agricultural commodities.

Fixing procurement prices

In order to increase foodgrains output, it is essential to ensure that prices should serve as an incentive for increasing production and procurement so that farmers could get reasonable returns. But in these years it appears that the price incentive has not recorded much success in increasing procurement and building up food stocks. As a result the Government procurement operations cover only about one-seventh of the total rice, one-fifth of total wheat and only fraction of one per cent of coarse grains produced in the country. In India Agricultural Prices Commission (APC), after taking into consideration the cost of cultivation, has recommended the procurement prices. Table No. 2 indicates the trends in procurement prices of paddy, wheat and coarse grains between 1971-72 and 1983-84.

Table No. 2

Trends in Procurement Prices of Paddy, Wheat and Coarse grains between 1971-72 and 1983-84

(Rs. per quintal)

Year	Paddy	Wheat	Coarse Grains
1971-72	58	76	55
1972-73	58	76	60
1973-74	70	82	72
1974-75	74	105	74
1975-76	74	105	74
1976-77	74	105	74
1977-78	77	110	74
1978-79	85	112.5	85
1979-80	95	115	95
1980-81	105	117	105
1981-82	115	130	116
1982-83	122	142	118
1983-84	132	151	124
% inc./dec. over 1971-72	127.5	98.6	125.4

Source : As Table No. 1

From the Table No. 2 it can be seen that the procurement prices of paddy has increased from Rs. 58 per quintal in 1971-72 to Rs. 132 per quintal in 1983-84, indicating an over all rise of nearly 127.5 per cent. Similarly, the procurement prices of wheat went up from Rs. 76 per quintal in 1971-72 to Rs. 151 per quintal in 1983-84, showing an overall rise of nearly 98.6 per cent. Likewise, the procurement prices of coarse grains went up from Rs. 55 per quintal in 1971-72 to Rs. 124 per quintal in 1983-84, i.e. an overall increase of nearly 125.4 per cent.

Till 1977-78, procurement prices showed marginal change and were often not adequate to meet the cost of production. But thereafter, the Government increased procurement prices for foodgrains to offset, to some extent, the increase in input prices and to ensure a reasonable return to the cultivators. From 1977-78 to 1983-84, procurement prices of paddy was increased by 71.4 per cent to Rs. 151 per quintal, that of wheat by 37.3 per cent to Rs. 151 per quintal and that of coarse grains by 67.6 per cent to Rs. 124 per quintal. For 1984-85, the procurement prices of wheat was raised by Re. 1 to Rs. 152 per quintal and the procurement price of common varieties of paddy was raised by Rs. 5 per quintal to Rs. 137 per quintal.

In providing a reasonable return to cultivators the policy does not appear to have achieved much success. For instance a comparison of procurement prices fixed with the available estimates of cost of production shows that often the procurement price was not adequate to cover the full cost of production though the gap has been considerably narrowed down. According to available data the cost of production shows that as against the procurement price of Rs. 7[illegible] per quintal in 1977-78, the per quintal cost of output of paddy was higher in the major paddy-growing States namely, Andhra Pradesh, Bihar, Haryana, Tamil Nadu and Uttar Pradesh. Though the procurement price was raised to Rs. 105 per quintal in 1980-81, it was lower than the cost of production per quintal in Bihar and just about covered the cost in Andhra Pradesh.

Irrigation

Irrigation development in years to come will have to be based on quick completion of on-going schemes such as utilisation of potential and better management, unfinished irrigation projects, medium and even minor, which are in an advanced stage of completion and are capable of yielding full or partial benefits in near future. New schemes should be restricted to medium irrigation projects in drought-prone areas and in tribal and backward areas, and to minor irrigation schemes. These should be funded adequately in years to come so as to yield benefits either within the Seventh Plan or in the early years of next plan period.

Banking facilities

In years to come it is stipulated that direct finance to agriculture should account for 15 per cent of the total bank credit by March, 1985 and 16 per cent by March, 1987.

According to the Annual Report of the Finance Ministry, Government of India for 1983-84, an overall target of 16 per cent of the total credit was set for banks. Since 1981, the banks had already crossed the target and touched a level of 17 per cent. Therefore, the new target has been exclusively set for

agriculture instead of for agriculture and allied activities.

There are various financial requirements and banking facilities in the development of agriculture. Some financial requirements and banking facilities are as follows :

(i) Introduction of the lead banks schemes to provide banking infrastructure in the rural and semi-urban areas and various forums to tackle the problems of flow of credit to agriculture.

(ii) Appointment of various working groups and study groups simplifying the lending procedure and introducing changes into the system and methods of financing, formulation of bank credit schemes.

(iii) Introduction of special projects and programmes namely, SFDA, MFAL, DPAP, CAD tribal sub-plan, hill areas development programme, desert development programme, special poultry production programme, intensive cattle development programme, small fishermen's development programme, IRDP, special component plan and the like under which the Government provided organisation staff and subsidy so as to help beneficiaries and banks to participate in the process of development. An effective role be assigned to credit in development and measures should be taken to link various credit schemes efficiently. In this process ARDC| NABARD has needed assistance for improving quantitatively.

While the above performance can indeed be considered modest, one has to endeavour to probe in detail to find out the reasons and compelling factors under which the commercial banks have been working the task of lending in rural areas. This is essential in order to appreciate that in future all-out efforts and policy will have to be evolved to improve the capabilities of banking system to increase the credit absorption capacity in rural areas where productivity, production and profitability of agriculture enterprise could be stepped up by deploying money to bring science and technology to the doors of the farmers. It is against this background that one has to appreciate the present challenges and future tasks.

Raising agricultural production

From the foregoing paras it has been brought out that agricultural output can be increased by increasing area under cultivation by increasing productivity in terms of yield per hectare and by extending more irrigation facilities. At present, there is nearly 10 million hectares of fallow land over and above the current fallows which stand at about 15 million hectares which is a potential source for raising agricultural production. Out of the total area of nearly 329 million hectares in the country, net cultivated area comes to 143 million hectares and gross cultivated area is about 175 million hectares. However, since the scope for expanding area under cultivation is limited, further increase in agricultural production should come from enhanced yield per hectare as well as from the multiple cropping. Similarly, there is plenty of scope for increasing yields per hectare in respect of major crops in the country which are far below yield levels obtained in other producing countries of the world.

There is further scope for raising productivity of irrigated lands. According to the information supplied by the Planning Commission irrigated lands should yield at least 4-5 tonnes of grains per hectare as compared to the existing yield which is hardly 1.7 tonnes on an average. Hence the yield per hectare of irrigated lands needs to be increased by ensuring timely availability of agricultural inputs namely, fertilisers, irrigation and high-yielding varieties of seeds. For this operation, according to the Planning Commision, Rs. 800 crores are required. As against the total irrigation potential of 65.6 million hectares created till the end of June 1984, actual utilisation comes to 60.5 million hectares. This means the irrigation potential of about 5.1 million hectares is not being utilised.

For increasing yield per hectare, it is also essential to promote optimum use of fertiliser. In our country there has been wide variation in the use of fertilisers among regions to regions, seasons to seasons, crops to crops. To day the India's average stands at 44.9 kgs. per hectare. The figures for the consumption of fertilisers per unit of gross cropped area ranging from 2 kgs. per hectare in Nagaland to 149.3 kgs. of Punjab and 231.4 kgs. in Pondicherry.

Increasing use of high-yielding varieties (HYV) of seeds is another aspect to be seen in raising productivity. To day, most of the HYV coverage confines to wheat and rice. In 1983-84, nearly 76 per cent of the 24.4 million hectares of crop area under wheat was covered by HYV's, in the case of rice it came to 54 per cent of the crop area of 41 million hectares. But for coarse cereals, HYV coverage stood at 29 per cent. Added to this in the case of rice and wheat, the use of HYV seeds is concentrated in Punjab, Haryana, Uttar Pradesh and Andhra Pradesh.

Prospects for agriculture

According to the latest Economic Survey, agricultural sector's performance will improve if the economy is to grow at about 5 per cent per year in years to come. Total agricultural production may have to grow at a higher rate as compared to the underlying trend rate of growth attained in the past years. To achieve this objective, it is vital that substantial investment should be put in land development, development of fallow land, development of irrigation potential and better utilisation of potential already created and increased production of quality seeds, pulses and oilseeds. In order to increase agricultural production, full utilisation of existing irrigation potential has been rightly emphasised.

Integrated agricultural development

D.K. Pahalwan and R. S. Tripathi

In another fifty years the population of India may double itself and require 277 million tonnes of food. It is not too early to start improving the management of agro-resources and integrate the agricultural planning, say the authors.

INDIA COVERS ABOUT 328 million hectares of land area. Its agro-climatic conditions favour raising of more than two crops in a year. The variation in agro-climatic factors helps in obtaining a well diversified agricultural production.

In view of fast growing population, food grains has had the highest priority even since we attained independence. It would continue to be our main concern in years to come. Planning Commission estimated that in 50 years from now, we may have a population of about 1375 million, we will then need to produce 277 million tonnes of foodgrain to meet the per capita requirement of 225 kg per year.

Much attention has already been paid for providing the agro-resources like fertilisers, irrigation water, improved seeds, credit, market, improved technology and extension services to the lower levels of their users. However, still there is vast scope for mobilization of these needed resources in the country. Effort has been made here to pin-point the future agro-resource management, and integrated planning for agricultural development.

High productivity of small farms

The agrarian structure of our rural economy is such that small and marginal farmers constitute nearly 73 per cent of the total farmers although they cultivate only about 23 per cent of the total cultivated area. Their earning from farming alone is small, due to low size of holding and uncertain production. However, in spite of the use of low inputs, the production potential per unit area is comparatively more under the small and marginal farms as compared to big farms. On the other hand, medium and big farmers do not manage their farms well thus the productivity of such farms remains below their potential. Hence, there is an urgent need to provide the inputs to the small and marginal farmers and awareness of role of farm management as well as business concept among the big farmers.

During last decades, the major objective of agricultural research and development was to achieve self-sufficiency in food. During 80's, the goal would not only be to further improve productivity and stabilized production but also to generate rural employment. Indian agriculture could be made more profitable by reducing the cost of production through more effective use of material inputs and by keeping a better balance between monetary and non-monetary inputs.

Improving the agriculture

The imbalance in the relative growth of different crops was observed, particularly after the 'green revolution'. The most urgent requirement today is to accelerate the growth in production of pulses and oilseed crops. Poor plant population, inadequate plant protection, cultivation in marginal and submarginal areas are some of the factors which reduce the yield of these crops. Special attention will have to be paid for strengthening research on these crops to improve their production and nutritive values. It is also required to evolve diversified cropping systems in heavy and well distributed rainfall areas instead of the mainly monocropping system with paddy that exists at present.

Statewise proper cropping patterns should be developed according to the soil, climate, availability of irrigation water and other agro-resources. Further, the cropping plans for different sizes of holdings be based on cost, return and risk. The farming systems should

be designed in such a way that crops suffer less due to drought and/or flood conditions. The availability of inputs like fertilizers, pesticides, seeds of high-yielding varieties/hybrids etc. has to be insured at right time and also at reasonable prices.

Better availability of manure

Maximisation of biomass production and re-cycling of organic-wastes would be some of the objectives of our future agricultural planning. It is estimated that about 1000 million tonnes of organic wastes in the form of crop-residues and another 300 to 400 million tonnes of cattle dung and organic droppings are available annually in the country. These materials contain approximately 6 million tonnes of nitrogen, 2.5 million tonnes of phosphorus and 4.5 million tonnes of potassium. Even if a significant portion of these essential nutrients are efficiently re-cycled, not only our yield but also the land would improve. Hence, emphasis on organic-forming should be given for improving the soil productivity.

Social forestry with planting of quick growing plants for fuel and timber is one of the solution of our major rural fuel problem. Installation of biogas plants in rural areas may be helpful in supplying energy for cooking and running of farm pumps. It also supplies good quality of farm yard manure. Hence sufficient incentives in the form of subsidies along with wide publicity for the use of 'gobar gas plant' would be helpful in solving our rural energy problems. Efficient use of solar and wind energy in agriculture and provision of good supply of electricity and fuel particularly diesel in crop growing season will further help in improving our future food production.

In the country's sixth five year plan, it has been postulated that fertilizer consumption must grow at a certain minimum rate to sustain the agricultural production in years to come. The estimates of total consumption of nitrogen, phosphorus and potassium for the year of 1989-90 is about 11.83 million tonnes. Even to sustain this growth it will be necessary for the government, industries, extension and promotion agencies to intensify their efforts and provide a good marketing system to its real users. Moreover, in future, there should not be any more sharp increase in prices of fertilizers.

On the other hand, for increasing the fertilizer use efficiency proper agronimical practices should be adopted inspite of the several constraints. The practices like green manuring, legume intercropping and legume in multiple cropping systems will be also helpful in decreasing the inorganic nitrogen, fertilizer demand of a farm. Possibilities of use of industrial wastes and by products as a manures and fertilizers should be tested. This will not only helpful to meet the future nitrogen demand but also check the industrial pollution.

Integrated strategy

A potential means of increasing agricultural production specially in rainfed areas is through collection and conservation of available water resources and by achieving a high efficiency of its utilization. An integrated strategy for utilization of ground and surface water resources and harvesting of rainwater in agro-ecological areas will be helpful in transforming our agricultural and rural economy.

Maximum utilization of irrigation facilities

Studies all over India had revealed that under irrigated conditions, the average yield of crops is comparatively higher and more stable than in the unirrigated or rainfed areas. Hence, there is an urgent need to increase the area under assured irrigation water supply. As per the report of National Commission of Agriculture, the ultimate irrigation potential in the country is estimated at 113 million hectares (2025 A.D.). Of this, about 58.8 million hectares by major and medium irrigation projects and 54.5 million hectares by minor irrigation projects. This will be equal to about 52 per cent of the gross sown area (210 million hectares).

The irrigation potential that has been created in the country when the sixth five year plan started was 56.6 million hectares which is about one third of our cropped area. In the sixth five year plan, it was proposed to create an additional irrigation potential of 5.7 million hectares from major and medium irrigation projects and 8.0 million hectares from minor irrigation projects. On the other hand, it was observed that the gap between utilizer and created irrigation potential is increasing with the increase in the irrigation potential. Hence, for controlling and/or minimising the water loss in conveying, a detailed study of the system becomes necessary to make the each project efficient and productive. Importance of lining of canals and proper scheduling of irrigation for different crops should be made available to the farmers.

Inefficient application of water can be minimised. Work on the command area development and popularization of crop-soil-water management practices may be encouraged for increasing the productivity of crops. Besides this, our irrigation policies should envisage (a) maximum production per unit area through multiple cropping under assured irrigation water supply (b) maximum production per unit of water in region of medium and low rain-fall and (c) stabilization of agricultural output in drought areas. In addition to this, the linkage among the irrigation and electricity departments should be strengthened for potential use of water for productivity purposes. It has been noticed at present that this linkage is rather weak or some time non-existent among these two sister departments.

Need for mechanisation

With the development of high yielding photoinsensitive, short to medium duration varieties of cereals, pulses and oilseeds and efficient agro-techniques under adequate irrigation facilities the possibilities of adopting relay and multiple cropping for maximising crop production have increased. However, the great limiting factor in adopting the intensive cropping pattern is the timely availability of sufficient labour to complete the important pre-and post-harvest cultural operations such as preparation of fields, sowing, weeding, harvesting and threshing etc. These have a direct impact on yield. Selective mechanisation or selective use of farm tools and machines not only helps in increasing the agricultural output by timely completion of field work but also would generate more employment. It was estimated that increased agricultural activities due to adoptation of improved farming technology with better water management generate, on an average about 40 man days of employment per hectare. Hence, the question that mechanisation of agriculture may affect the employment of landless farm workers does not hold valid.

Better means of communication

The marketing opportunities will have to be carefully studied and appropriate advice and facilities should be given to farmers at right time so that their efforts are adequately rewarded. Individual, group or cooperative storages should be encouraged so that farmers can keep their produce to avoid middle-men interactions. Further, improvement in the basic marketing infrastructure needs considerable attention by the planners and administrators so that proper supply of input-output can be maintained in the markets. The importance of transportation may be realised in many ways. It helps in reducing the cost of production by lowering the cost of transport of inputs from the market to the farm and outputs from the farm to the market. Thus, for the smooth development of agriculture in India there is an urgent need to link the villages with the main cities of the locality and country as a whole by constructing roads, rails and water-transport systems specially in backward and neglected regions of the country.

Integrated weeds, pests and disease control measures along with increase in the production and coverage of herbicides and pesticides will be helpful in controlling weeds, pests and diseases. Necessary emphasis should also be laid on strengthening research on fruits, fodders, vegetables and horticultural crops. Designing of proper coastal agriculture-cum-mariculture system of farming not only helps in improving the diets and malnutritional problems but also checks the coastal erosion.

Developing mariculture

The territorial water of India extends to a distance of 12 nautical miles. Hence, utilization of about 12 million hectares of sea area for harvesting fishes from sea has to be potentially exploited. Research on aquaculture should also get higher priority to develop relevant technology for production, collection, processing and marketing of both inland and marine fisheries.

Animal population figures indicate that India is having largest animal population. It includes 178 million cattles and 58 million buffaloes. Most of the milk is produced by buffaloes though milch cows (22 million) outnumber milch buffaloes (15 million). However, because of their low productivity, milk and milk products are not even sufficient to meet the per capita requirement of the people. Secondly, the marketing infrastructures of the animal products are practically non-existent in the rural areas and thereby the producers are not getting proper remuneration. Special attention should be paid to popularize the animal husbandry and poultry production in dry and hilly areas under mixed farming system.

Forests occupy an area of nearly 63 million hectares constituting 20.5 per cent of the total geographical area of the country. In an agricultural country like India, forests play an important role in providing the economic goods. It also helps in maintaining the productivity of agriculture and ecosystem. Apart from the material utility of the forests in fulfilling various requirements of local people, they also help in checking floods, ensuring perpetual flow of water in rivers and maintain a balance between different gases in the atmosphere. Installation of forest based industries near the forests will also provide the gainful employment to nuemployed or underemployed particularly tribals and backward peoples.

Extension agencies or institutions are an important media for communication of farm technology from the research institutions centres to the farmers.

How trees prevent pollution!

THE PLANTATION OF TREES is beneficial for reducing pollution caused by vehicles etc.

Based on the studies conducted by the National Botanical Research Institute, Lucknow, Banaras Hindu University, Varanasi, Jawaharlal Nehru University, New Delhi; Institute of Science, Bombay; Calcutta University, several pollution-tolerant plant species have been identified. The Department of Environment is also initiating an All India Coordinate Project on plant responses to air-pollutants. The thrust of the work will be to identify suitable species in different regions for reducing air pollution.

There is no specific programme for plantation to reduce air-pollution. However, some of pollution-tolerant species are included in the general scheme of plantation.

Dumping hazards on the weak !

Subhash J. Rele

When some items of clothing, medicine or food are banned in home market of developed countries, the manufacturers have nothing to worry about. They can still sell those items outside, especially to the third world. In this way, in their efforts to minimise the losses, they are free to sell death to unknown customers. And even law can't touch them for this criminality ! The author cautions that the third world should wake to the dangers of this hazardous dumping and learn to fend itself.

DUMPING HAZARDOUS PRODUCTS in the poor, less developed third World countries has become a booming billion dollar business. It also promises to become one of the hottest international controversies of the decade. Each year thousands of tonnes of hazardous products manufactured but banned in the United States find their way into the third world markets. Dumping involve not only manufacturers and retailers, a vast array of export brokers, tramp steamers, black marketeers and go-betweens who traffic an estimated $ 2 billion worth of unsafe goods oversees every year, but also the US Export-Import Bank, which finances large dumps ; the Commerce, State and Treasury Departments which have the statutory authority to stop or control dumping, but won't; and a President, who in his quiet way, subverts the efforts of the few progressive members of the Congress who seek to pass uniform anti-dumping legislation.

More than a year ago, the UN General Assembly adopted a resolution introduced by 23 developing countries prohibiting the export of banned, hazardous products without the knowledge and official permission of the importing country. On the face of it, the resolution seems uncontroversial but the Reagan administration cast a dissent vote in a 146-1 vote. The argument forwarded by the American administration was that it would create excessive regulation and restrict free trade. Most of the US manufacturers show no compunction about dumping hazardous products banned in their country on third world people. Dumping does raise hackles in some developing countries but it has no long-term impact.

In the garb of transfer

The wholesale transport of either manufacturing plants or the technology required to produce hazardous goods into another country is also a kind of dumping. Plants may be shifted from sites in the US and located in under-developed countries for a number of reasons including the availability of cheap labour force and energy supply, tax incentives and the avoidance of environmental regulations and occupational health and safety standards. A desperately poor country often will accept a "runaway" plant which produces hazardous goods as the only way to bring in capital investment jobs and tax revenues. When for example, aldrin, a highly toxic pesticide and dieldrin, its breakdown product, were banned in the US in 1974. Shell Oil, quickly switched their production from its California plant to the Netherlands thus enabling Shell to continue exporting the pesticide to other countries. A year after the American ban 13 children died in Brazil of aldrin and dieldrin poisoning.

Dumping has been a favourite money-spinner of several US multinational corporations. Public attention was, however, focussed in 1977, when US manufacturers exported about 2.4 million baby

garments treated with the carcinogenic chemical-Tris, which had been banned from domestic sale. Laboratory tests subsequently showed that Tris caused kidney cancer in children exposed to it at the rate of 300 per million boys and 60 per million girls. The Consumer Product Safety Commission banned the domestic sale of all Tris-treated children sleepwear. While the small manufacturers sought to recoup some of the loss from the Federal Government, two larger multinational corporations safeguarded their financial interest by unloading the stock in Third World countries. More than three years later, Tris-treated fabrics were exported to Ghana. Experts in the trade estimate that tens of millions of pairs of Tris-treated pajamas were shipped quietly out of the US between the time. Tris was banned in 1977 and June 1978 ; when the CPSC slapped a ban on Tris exports. Many of the sleepwear even went to Europe and many more to the under-regulated and unsuspecting lesser developed countries. It is obvious that in such cases checking the number of children who became victims of cancer would be impossible.

Pesticides and fungicides

Several other examples of this sinister practice began to attract public attention. An undisclosed number of farmers and 1,000 water buffalos died suddenly in Egypt after being exposed to leptophos, a chemical pesticide which was never registered for domestic use by the Environmental Protection Agency, but was exported to 30 countries. Another report also surfaced that 400 Iraqis had died and 5,000 more had been hospitalised after eating wheat and barley imported from the US. The grain had been treated with a mercury fungicide banned from domestically used grain.

Women are passive recipients of many potentially hazardous drugs and other devices when low-cost alternatives exist. The intrauterine device called Dalkon Shield has been making sad news everywhere. After the device killed at least 17 women in the USA, the manufacturers withdrew it from the domestic market. It was sold overseas afterwards without let or hindrance, and is still in common use in several poor countries. All over the under-developed world, including India, there are over half a million women with the Dalkon Shield implanted in them and the majority do not know what it is all about. It was recently revealed that the multi-national corporations distributed, with an alleged consent of an American agency, larger quantities of the same contraceptive, 'unsterilised' in the Third World, a practice that would never be allowed in the USA itself. Nobody can give count of the number of women who lost their lives and their health.

Pacifiers that kill

Few hazardous products have created more excitement than the US manufactured pacifiers. Between 1964 and 1975 atleast 7 healthy American babies choked to death on pacifiers. During this time, hundreds of babies experienced near-fatal suffocation, cardiac arrest, brain damage and lesser injuries after swallowing poorly designed pacifiers. It wasn't until October 20, 1976, after many more accidents and several additional fatalities, that the Consumer Product Safety Commission proposed pacifier's safety standards. CPSC's proposed regulations laid that a pacifier should have a shield large enough to prevent it from being swallowed, and have two ventilation holes on the shield to ease breathing if swallowed. Not one single pacifier on the American market satisfied the new standards. In 1977, the CPSC announced a virtual ban on the manufacture of old-style pacifiers. Even before the ban became final, the dump began. The Evenflo Product Co. of Ohio, famous for its baby bottles, exported more than 1,63,000 hazardous pacifiers throughout the world making it biggest dump in Iran, Venezuela, Puerto Rico and the Dominican Republic. Binky Baby Products of New Jersey dumped 50,000 pacifiers in Canada, South Africa and Venezuela. The dump continues even now. Not many bother about the consequences.

Toothless task force

The discussion on hazardous product's exports began in the US in 1979 with the formation of a Government Committee called Inter-agency Task Force of Hazardous Substances in Export Policy. The Task Force has hardly any teeth and dumping goes on unabated. Often included in the shipments are banned drugs and pesticides such as Aldrin and Mirex, both of which have been withdrawn from use in USA. Random inspection at various docks of food exports found such items as 6,700 boxes of insect-ridden rice bound for Chile ; 3,200 pounds of moulded flour headed for Abu Dhabi and 200,000 pounds of yellow cornmeal contaminated with bird and rodent faeces destined for Netherlands. Regrettably, the current US position is yet another example of the Reagan administration's patronisingly dangerous attitude towards the Third World countries. After entering the office, 34 days later President Reagan rescinded ex-President Carter's order which called for an unified notification process whereby the US Department would inform all other nations about products banned or restricted by the White House. Reagan asked the Secretary of State Alexander Haig and the Secretary of Commerce Malcolm Baldridge to re-examine the entire matter. Both of them sent a Memorandum to the President in total agreement with the "'hands-off" position of the chemicals and pharmaceutical industries, the strongest multinational group in the USA.

How considerate ?

What concerned Government officials was that it was perfectly legal and morally justified to dump

almost anything found too toxic or dangerous for American consumption on innocent overseas consumers. The welfare of the poor in the Third World countries has never been on the Presidential agenda. The top brass in the US Administration found solace in the fact that the US was not the only country dumping hazardous products overseas. Several other industrialised countries like UK, West Germany and multinational corporations have been caught in the "unworthy, unscrupulous" act as well.

In November 1979, "Mother Jones", the monthly magazine, released an extensive investigative report on dumping. The magazine detailed a booming trade in banned drugs, unregistered pesticides, dangerous consumer products and obsolete technologies. The export of such products from the US alone was estimated to have reached a volume of $ 1.2 billion annually. The US industries and mncs were furious. In several cases they strongly objected to the Government's intervention. They trotted some indefensible arguments in their defence : they argued that it should be the right (headache) of an importing country to make its own risk-benefit analysis of a product, and decide for itself whether or not to import the products. Secondly, the US should not impose its own standards on other countries. Thirdly, placing controls on products serve as a disincentive to exports and will hurt the country's balance of trade and reduce US industrial production. Again, focussing attention on any one of the products places a stigma on the entire industry that makes it. If importers cannot or do not buy a product from the US, they will simply shop elsewhere.

Criminal offence

The enlightened circles in the Third World argue that the American business leaders who tout themselves as the most ethical business people in the world should lead the way in ending this dumping. It is in their best interest to do so, for by dumping toxins on the Third World they are actually poisoning the very markets they seek to develop. Realising that the current American administration is unlikely to do anything to curtail the flow of toxins and other hazardous products into foreign markets, trade officials overseas have begun to take matters into their own hands. Some countries have taken immediate action : like Zimbabwe suspended the use of Depo Provera, the contraceptive which created havoc with women's health; Kenya banned certain pesticides and medicines. Recently, Bangla Desh banned certain dangerous drugs. Under-developing countries do not have the bureaucracy to control imports—particularly when they watch for tricks that many corporations use to get their products part custom officials.

Recently, the International Organisation of Consumers Unions (IOCU) particularly their Regional Office in Penang, Malaysia, took up the cause. IOCU has brought the dumping crisis to the attention of their 121 member organisations located in 50 countries and activated numerous other consumer advocates and government leaders throughout the Third World. IOCU has also brought the issue into the General Assembly of the UN.

There is no reason why dumping should not be clearly defined by statute and one more appropriate term, such as "illegal for export" be applied to products found to be dangerous in the country of their origin and therefore anywhere. Dumping should be made a criminal offence. Any enlightened Government should find such a proposal sound. The US government, for example, which already controls exports through the Commodity Control and the Bureau Census must accept the responsibility of monitoring the banned hazardous products for export. Nobody expects Reagan to declare dumping a criminal offence. The Third World, in particular, has to fend for itself by boycotting imports of hazardous products from the US and other countries. The industrially advanced First World is too selfish, too self-centered to bother about the poor in the Third World. They are too preoccupied with bulding their skyscrapers of pelf, profit and power. □

Special assistance for tribal development

SPECIAL CENTRAL ASSISTANCE for tribal sub-plan for 1985-86 has been fixed at Rs. 140 crore which is higher by Rs. 14.5 crore than last year. Generally, the Special Central Assistance is utilised mainly for family oriented schemes and such critical infrastructure relevant to the family oriented programmes.

Under the tribal sub-plan, a Special Central Assistance of Rs. 486.62 crore was allocated to states and Union territories during the Sixth Five Year Plan. The Working Group on Tribal Development have recommended a Special Central Assistance of a higher magnitude for the Seventh Plan period (1985—90). The VII Plan allocation is yet to be decided by the Planning Commission.

The tribal sub-plan is an area development plan with particular focus and emphasis on development of tribal population. At present, it covers 75 per cent of the Schedule Tribes in 17 states and 2 Union territories. The Special Central Assistance is in the nature of an additive and is supplemental to the flow from State Plan for the tribal areas.

The expenditure pattern of Special Central Assistance during the VI Plan reveals that about 43 per cent was utilised in sectors of beneficiary oriented nature, 32 per cent on social services, 4 per cent on infrastructure and 21 per cent on other related sectors. □

Andamans' march towards progress

We present here an interview with Shri M.L. Kampani, Lt. Governor of Andamans and Nicobar Islands, by All India Radio Port Blair correspondent, Shri M.R. Madhusudan Varma, which was earlier broadcast by AIR. The interview throws light on the all-round developmental activities of the Islands and the projected targets in the Seventh Plan.

Correspondent :

Development of a remote territory that too distant from mainland separated by sea is a major task. Mr. Lt. Governor, Sir, how do you look at the developments of these Islands ?

Mr. Kampani :

We are separated from the mainland by 1200 k.m. of sea. This distance from the mainland does present lot of problems but these are not unsurmountable. The development of communications between the main land and the Islands has therefore been of great importance in the past plans and we are giving due emphasis on this in the 7th five year plan also. We are dependent on the mainland for most of the items required for development; these include Cement, and Steel, Petroleum products, Food supply, and Consumer items. In each plan major portion of our outlays has been spent on improving communication. In the 7th plan out of total outlay of 285 crores, about 139 crore has been allocated to the sector Shipping and Transport.

Correspondent :

Islands have achieved and exceeded the targets in almost every item of 20-Point Programme in the Sixth Plan. Will you please tell how this speedy implementation was possible ?

Mr. Kampani :

Basically it is due to co-operation which we have received in abundance from the people of the Islands and they have interest in improving their lot. We have a democratic set up with the Pradesh Council at the territory level. We have good Panchayats and you know our members of the Pradesh Council are elected indirectly through three electrol colleges. 14 members come from 43 Panchayats, 5 members are elected from amongst the Port Blair Municipal Board members and 6 other from amongst the Captains of the tribal villages. This body has played an important role in bringing the requirements of the people to the Administration and helping in speedy implementation of the programmes being taken up by the administration. Also we have been able to sanction schemes well in time in the early part of the year so that people can start work immediately after the monsoons when the working season starts. Regular monitoring of the programme has also helped in ensuring their speedy implementation.

Correspondent :

However Islands have not achieved self-sufficiency in most of the spheres including the food front. For almost everything we have to depend on mainland. What steps are you taking to tackle this problems?

Mr. Kampani :

We do not have much land in the Islands. Our total area is 8923 Sq. K.m. Most of it is covered by lush green tropical forests. A decision, therefore, was taken much earlier, and very wisely so, that the Islands territory need not be self-sufficient in food supplies. This was basically done to ensure that more land is not brought under the conventional agriculture at the cost of the forests. We are, therefore, more

keen on developing plantations than increasing the area under conventional agriculture. Our present plans in agriculture are to go in for plantations and intensive agriculture by improving our farm technology, use of better fertilizers, seeds, etc.

Correspondent :

Andaman and Nicobar Islands are unique with the presence of 6 types of tribals. What welfare measures have you taken for the upliftment of these tribals and the primtive tribals like Ongees, Jarawas, Sentenelese and Shompens ?

Mr. Kampani :

As you mentioned, we have 6 tribes. Their total population is about 23,000. Out of this Nicobarese are about 22,000. They are very progressive people and have organised their community life on co-operative basis. The other five tribes, that is, Andamanese, Ongees, Shompens, Jarawas and Sentenelese are in different stages of development. The Andamanese and Ongees have been settled on permanent cultivation and have also been provided with dwelling houses and are living in groups. Shompens are staying in small villages very wisely separated from each other. They are now in contact with the administration and every effort is being made to increase this contact and give them assistance by providing more nutritional food, medical assistance and facilities for catching more fish, hunting, etc. Two separate contact teams have been set up one each for contacting Jarawas and Sentenelese. To ensure regular and continuous contact the team visits the tribes on full moon day. Over the months the tribes expect this team to visit them on the full moon day. This has improved the contact with Jarawas and a large number of them come to meet our teams whenever they visit them. The Sentenelese, allow our team to land on their islets and leave the gifts, but they themselves remain a little distance. As such, we have no contacts with them but it is expected that we will be able to get closer to them in the near future.

Correspondent :

What are plans to exploit the tourist potentialities of the Islands ?

Mr. Kampani :

The Islands have considerable natural beauty. Islands are endowed with unpolluted clear sea water, lush green forests and mangrove creeks. Islands have also become a land of national pilgrimage as it was here that many of our freedom fighters were sent and put to suffering and torture. We have been developing tourist infrastructure. We have already 2 good hotels run by private parties. They have about 70 rooms and both the parties are thinking of adding more rooms. One more three star hotel with about 60 beds is under construction. The administration has already about 142 beds and are thinking of putting up a hotel and also another tourist room with about 60 beds. The future of the Islands will depend on developing water sports and speedy communications between the islands which have already been opened up for tourists. Every effort is being made to provide this facilities. Another prospective to link up Port Blair with Bangkok. Possibly a flight could go from Madras to Port Blair to Bangkok. This will attract considerable number of tourists from the East. We are trying to improve our air port so that it can take international flights.

Correspondent :

This time Islands have received the 7th plan outlay three times bigger than that of the last plan. What is the reason for this increase and what are the plans and projects planned to be taken in the 7th plan period ?

Mr. Kampani :

In the Islands we are in the process of developing infrastructure. We have, therefore, to spent considerable amount on shipping, on develoment of roads, on power, and other such sectors. As you will see in our 7th five year plan the emphasis has been on shipping and roads. We are going to spend more than 139 crore out of a total outlay of 285 crore on shipping alone. This includes 90 crore for 3 ships which will ply between the mainland and the islands. We also, during the plan, hope to complete the Andaman Trunk road. This road touches more than 300 k.m. between North, Middle and South Andaman which are now seperated by sea. The Middle Andaman portion is ready, 53 k.m. remaining portion in the North Andaman will be completed and about 22 k.m. in the South Andaman. With the completion of this road, there will be less pressure on the ship as far as the northern islands are concerned and people will be able to travel from Port Blair to Diglipur by road. We have also earmarked 13 crore for Kalpong Hydro Electric Project in Diglipur area. This will give us about 3 mega watt of power. We have total installed capacity of 10 mega watt. During the 7th five year plan period we want to increase it to 25 mega watt. We also want our medical cover to improve, particularly the specialist services, to provide better medical care to the people. More emphasis will have to given to animal husbandury as there is considerable scope for the development of cattle, piggery, poultry, goatery and duckkery. There is shortage of good housing. We have to provide better houses to our Government servants and also to the general public. We have improved our fish catch in recent years. Government is very keen in the development of these remote areas.

(Courtesy : All India Radio)

Importance of electronic data processing

Yojana Correspondent

THE UNION MINISTER of State for Planning, Shri K.R. Narayanan, emphasised the need for developing countries to acquire the latest knowledge and all the modern tools and methods for collecting and processing the vast amount of socio-economic data needed for developmental planning and policy formulation. He was inaugurating the sixteen-week long training course on electronic data processing organised by the Central Statistical Organisation of India in collaboration with the Computer Centre of the Department of Statistics, Planning Ministry, with the support of the United Nations Development Programme and the Economic and Social Commission for Asia and the Pacific in New Delhi recently. This was the fourth training course. The first such training course was started in December 1982. The trainee participants were from Afghanistan, Bangladesh, China, Indonesia, Nepal, Papua New Guinea, Philippines, Sri Lanka, Thailand and Vietnam.

The Minister stated that the developing countries needed trained personnel in increasing numbers in all technological fields, especially in the field of statistics, computers and electronics. These were the modern tools and methods with which we could put our old societies, concealed in traditional ways, on new and dynamic paths of development, he added.

Highlighting the importance of training courses like this, Shri Narayanan said that in such training we not only learnt electronic data processing but became familiar and friendly with the mind-boggling new inventions in the ever expanding electronics. He gave a note of caution against the misuse of electronic machines and said, "living as we do in the Asian-Pacific region in ancient societies with time tested values and patterns of living, we must not allow ourselves to be dominated even by the most sophisticated and fascinating machines which were rapidly assuming a kind of life of their own; we must always keep the lead in human hands and lend the machines to our purposes and use them for the development and progress of mankind and of course for the development of our countries according to priorities determined by us. That means we must, first of all, learn how to use these machines and make them minister to human and social purposes".

Shri Narayanan underlined the importance of statistics and said how during the last 34 years statistics in India was serving as the hand-maiden of democratic planning and helped the country in the formulation of its plans and in the resolution of its socio-economic problems. He also highlighted the great importance that the Prime Minister, Shri Rajiv Gandhi, attached to science and technology in development, in taking India into the oncoming 21st century and said that it was important that we in the developing world should not miss the computer and the electronic revolution as we missed the earlier technological and industrial revolutions in history.

Highlighting the importance of computerisation, the Minister said computerisation opened new vistas and opportunities for statisticians reducing the time lag in data processing and facilitating quicker and deeper analysis. Storage and retrieval of data, updating of information, and tabulation and analysis of survey results were made easier and more systematic by computerisation thus providing valuable, timely and relevant inputs into the overall developmental process and policy formulation.

The training course comprises Sampling and Survey Methodology and Electronic Data Processing. So far the Government of India has conducted three such courses. Nearly 50 personnel have since been trained. □

Continuing education for adults

Iqbal Mohiuddin

Adult education is meant for those who can't spare time for formal education, who are not interested in acquiring degrees and diplomas, but want to improve their economic condition by equipping themselves with technical and general information regarding their jobs and environment.

THE EDUCATIONAL process consists of a series of tasks arranged as an ordered development sequence of intellectual behaviours (reading, thinking, memorizing, studying, etc.) structured around a body of content that progress from known to unknown, from concrete to abstract and from simple to complex. These tasks must be selected and arranged in such a way that the resultant responses insure achievement of the learning objective.

Why continuing education for adults ?

Most of the students in the age group 15-35 cannot afford either to attend or continue their formal education as they are either productively busy or looking after the domestic work or due to economic reasons.

The adults, to be covered by the non-formal education are those who cannot afford to wait.

The above-mentioned points suggest that there is a need for developing a non-formal education programme for adults. But in order to develop a relevant and functional programme of non-formal education we will have to take into consideration the characteristics and the needs of the adults.

Environment-oriented approach

On the basis of the experience of the past and the resources and commitment available at present, a workable approach for continuing education for adults is hereby proposed, which may help in developing the necessary competencies in the beneficiaries through the maximum utilization and exploitation of the environment adopting the need and problem based-approach. This may be called as "Competency, Environment-Oriented and Need-based Approach". In order to reveal the nature of this approach it seems necessary to specify these three components and realize their functional relationship.

The aim of this approach will be to develop competencies in illiterate adults to understand what they listen and read, express what they want to say and write, to add, substract, multiply and divide numbers, etc.

In order to make continuing education for adults environment-oriented the tasks to be accomplished include : practical knowledge of the environment, revealing the potential of the environment in terms of its relationship with the health and vocations of the people. The wholé approach should be such as the higher education may develop a healthy and positive attitude and a sense of belongingness to the environment.

In order to adopt the need-based approach local specific and group specific needs and problems pertaining to health, vocation and social and national life should be identified, analysed and understood and solutions for satisfying the needs and solving the problems should be identified. Relationship among the individual needs, problems, social values, physical and social environment, and the inter-relationship of all these with different subjects and disciplines should be reflected in the curriculum and instructional programmes in a functional way.

Dimensions of curriculum

The role of higher education in the promotion of continuing education for adults should be identified under six categories of dimensions of non-formal-

education curriculum for the adults of rural and urban areas. There are :

1. Health
2. Vocation
3. Environment (Physical and Social)
4. Social Awareness
5. Literacy
6. Numeracy

The identification and clarification of the content included in these dimensions may involve a thought-provoking approach for the development of curriculum and instructional materials by the Universities. These are the basic factors on which a need-based and environmental oriented curriculum may be framed for the adult and continuing education of rural as well as urban areas.

The role of higher education

The role of Universities in the promotion of adult and continuing education in rural areas should be (i) to develop need-based educational activities and programmes for the adults and (ii) to develop suitable instructional materials with the help of different agencies.

The Universities should act as a catalytic agent for boosting up the academic and vocational training activities of the affiliated colleges which collaborate in the promotion of adult and continuing education programmes in the rural areas. A special cell should be established by the universities which will find out and classify the local needs of the adults of the rural India. On the basis of their priorities, the environment oriented and need-based curriculum would be framed and implemented by the Universities for rural areas.

The cell will also be responsible for providing training courses in work-experience etc. for preparation of items such as soap, chalk and candle.

The special cells set up by the Universities should identify the needs and problems of the rural areas and find out the unexplored resources which have not attracted the attention to meet their requirements. The role of higher education will be to educate the adult population to have a sort of cooperative life without sacrificing, their individuality. Due to lack of knowledge and ignorance the illeterate adults of the rural areas do not know as to whom should they contact in case of their economic, social or cultural needs. They should be given full knowledge by the Universities through their specially framed continuing education programmes for rural areas. Similarly, vocation training should also be given to the adults for the improvement of techniques of production. Craftsmen are the essential service class of rural men and the essential service class of rural India. Knowledge of new techniques should be given to them. The role of educationists can not be over-emphasised in the rural sphere. They have to contribute a lot of their expertise and practical knowledge to the adults and continuing education programmes of rural India. Surveys are to be done for finding the needs and problems of the villages and for setting up different cells to cater the needs of the rural population. These specially established cells in the rural areas should give the information to the adults regarding block development programmes, district development centres, rural electrification programmes, rural road development programmes etc.

In urban areas

Again the six prescribed components of curriculum for adults (i.e., health, vocation, environment, social awareness, literacy and numeracy may be applied in urban areas. Urban areas have different problems from those of rural areas. In the cities the population is denser and has special problems. The vocational problems of the urban population are quite different from that of the rural population. The role of Universities for the promotion of continuing education for adults in urban areas should be to identify the types of needs, vocations, identification of local problems, their anlysis and to develop possible solutions of the problems through higher education. Having in view the vocational needs in a particular physical and social environment the Universities should provide vocational training courses to the adults of urban areas. Research-based knowledge should be provided to the vocational beneficiaries for the development of their skills. Kanpur being a centre for leather and training industry, the adult workers should be provided the technical know-how for the improvement of the industry. The technical curriculum should be provided through higher education of the Universities. Research-based knowledge should be provided to the adult workers who are engaged in them. To provide research based knowledge to the adults of the Urban areas is the purview of higher and technical education. Thus we see what important role the higher education can play for the promotion of adult and continuing education in urban areas.

Promoting continuing education

The system of research in Nalanda University was based on practical knowledge and on-the-spot enquiry. A research scholar was asked to find within the radius of five miles from his house anything which had no medical value. The research scholar did the job thoroughly and returned to the University after five years and reported to his supervisor that he did not find anything which had no medical value. He was awarded degree on his findings.

This was the spirit behind research during the ancient days in Nalanda University. The professional technical institutes colleges make enormous contributions through research-based knowledge for the development of science, technology, medicines and agriculture both in rural and urban adults for the improvement of their vocations. Agricultural Universities in U.P. are doing their job well and also provide technical knowledge regarding various aspects of agriculture to the peasants and adults of the rural areas.

The professional and technical colleges produce doctors and engineers for the well-being of humanity. The doctors can help the adults with information about various diseases, teach them about their health, nutrition and hygiene. Health-based instructional material, can be produced for the benefit of the rural and urban population. In the same way engineers can also help the rural and urban population in getting their water problems solved. Buildings, roads, canals, underground drainage system etc. can be provided by the engineers and knowledge about them may be provided to the adults through higher education, training camps, literacy and community centre.

Chemical institutes can also help by testing soils for better use either for agricultural purposes or construction works. Broad knowledge of soil can be provided in higher education for the benefit of adults in the rural and urban areas.

Radio and transistors are the cheapest source of communication to the rural population. Even newspapers can not beat them because news papers are (i) costly and (ii) they reach the remote villages very late or sometimes do not reach at all. So the most reliable source of getting latest news is the radio and transistors. But, the people, sometimes, do not know how to handle them properly. Such information should be given in the technical and vocational camps to the rural as well as urban illiterate adults. Universities should develop their own radio programmes for the adults either themselves or with the collaboration of some agencies. These programmes should be problematic and need-based. Universities may create new department for this purpose.

The peasants using tube-wells and tractors for agricultural purposes in the rural areas and the mechanics using machines or other adults using miscellaneous tools in the factories in the urban areas, sometimes do not know how to repair their machines or how to handle them properly at the time of their breakdown. The elementary technical knowledge should be given to them for saving their time and energy. Co-operative shops should be established in the rural areas which can provide spare parts for pumping sets and tractors at the time of need at the reasonable prices.

Coaching centre both at rural and urban levels should be establised by the colleges of education for providing technical education and professional guidance to the adults. Universities may take up programmes on vocational, technical and scientific matter, medical and agricultural aspects etc., for the specific purposes of transmitting the knowledge of their training to the adults of rural and urban areas.

Courses and instructional material may be prepared in the University Deptts. of Education for Adults based on their specific needs and the needs of the region. Teachers and expert education may help in accelerating this programme at both the levels, urban as well as rural. These courses may be taught in the rural and urban community specifically established for the continuing education for the adults.

Women's literacy is also an important aspect of continuing education for Adults Programme. Provision should also be made for continuing education for women in the curriculum of higher education. Need-based programmes for women should be chalked out by the Universities and should be implemented for the upliftment of women in society both in rural and urban areas. In this way the colleges, technical and professional institutions can play their vital role in the promotion of continuing education for both adults, males and females in rural and urban areas through higher education.

Now, I have an humble submission for the kind consideration of the people engaged in the conduct of higher education programmes recently started by quite a good number of Universities. Invariably majority of these programmes, to my utter surprise, have been confined only to the formal system of education, trying to rope in only those people who are desirous of higher degrees and diplomas for one reason or the other and completely being indifferent to the larger section of adult population who are not interested in acquisition of degrees or diplomas but are in dire need of improvement of their economic plight. To my mind, until and unless they are covered under the umbrella of continuing education unit of the Universities the latter is not worth calling itself a continuing Adult Education Programme. My friends, associated with these programmes in the Universities should give serious thought to it and do something concrete to remove this lacuna.

Rs. 125/-

Review article

Economic policy and planning

M. M. Ansari

IN THE PAST three decades, several volumes have been published on the problems dealing with the major issues in economic policy and planning in India; some have tried to suggest remedial measures. Unfortunately, barring a very few, none appears to have been able to develop a proper perspective for policy planning that should be consistent with both democratic polity and federal structure and mixed economy. The present volume, under review, which has been brought out to commemorate late Professor Baljit Singh, is however no exception.

The book comprises a collection of 23 articles which are grouped into four parts, namely; (i) Technology, Manpower, Demographic change and Development; (ii) Institutions and Development Planning; (iii) Development Patterns—National, Regional and Sectoral; and (iv) Trade, Fiscal and Monetary Policies for Development. A general comment on the book is in order. First, some of the articles are contributed by eminent economists and their views are already known among the economists and the planners. Second, as the articles have been written independently with different objective and perspective and at different points of time, there is no coherence and consistency between them. Each article, however, concentrates on specific theme and some of them raise pertinent issues.

In Part-I, the first three articles provide a detailed discussion on the strategic importance of technology in development of the Third World countries and emphasise on the need for technological transformations of such countries for accelerating the pace of development. While the fact is that almost every country is making its utmost effort to make use of available technology for bringing about desirable improvements in efficiency and productivity, their success is greatly hampered by both the non-availability of adequate physical and financial resources to acquire technology and the reluctance of the advanced countries to transfer the appropriate technologies. The dilemma however is that while the developing countries have jointly raised the voice at the international forums for transfer of technology, these countries have not made desirable endeavours for extending the application of the available technologies in all the sectors of the economy and regions which are within their purview.

The article on approaches to planning for employment creation in rural areas has rightly emphasised on the need for strengthening linkages of the type indicated above. The analysis has however been carried out in isolation from (i) the role performance of the rural development programmes which have been implemented during the Five Year Plans; and (ii) the extent to which the present rural employment schemes and rural economic activities are inconsistent with the activities of the organised sector. In fact rural and urban economic activities has been playing a complementary role, though this role could be revitalised and strengthened through appropriate policies; such policies could have been detailed in the light of our past experiences.

The evidences on interlink between the demographic conditions and the major socio-economic indicators of development are noteworthy. As may be expected, the relationship between fertility and income, employment and education indicate changes in the desirable direction. Indepth upto-date studies on these aspects would undoubtedly assist in formulating appropriate policies from time to time.

The application of regression approach as has been tried, in the subsequent article, to determine the extent of relationship between labour supply and earnings, is not ideally suited to the kind of data which has been used in the study. Infact, the informations characterising qualitative aspects are not easily susceptible to measurement. One would expect on *a priori* grounds that acquisition of skill and age factor (experience) would be positively associated with earnings. The result however show a negative relationship; meaning thereby, increase in age and improvement in skill would adversely affect the labour earnings. The results contradict the theoretical expectations which could be attributed largely to mis-specification of the econometric functions. As many of the users may not be fully aware of the intricacy from which the results are derived, the inferences drawn from such exercises might lead them to misplace policy emphasis. A great deal of caution ought to be exercised therefore in both selecting the methodology and drawing the conclusion.

In Part II, while making observations regarding the functioning of the Union Planning Commission and the performance of India's mixed economy, the authors have rightly emphasised the need for relaxation in the central control over the functioning of the Commission and for revitalising the operation of the mixed economy. In both the cases, a considerable political will would be required to effect certain socio-economic changes in the country through appropriate reforms, so that economic activities could be increased through increase in people's participation.

A major area of concern, namely, agrarian economic structure, has been discussed in another article, which focussed on the problems and dilemmas of land reforms and points out the responsibility of the elite class in activising the forces of economic change. Needless to mention, as compared to pre-independence

Economic Policy and Planning in India; Edited by A.K. Singh. T.S. Papota and R.S. Mathur, Sterling Publishers Pvt. Ltd., 1984 Rs. 200/- P.P. 467

era, a considerable degree of land reform has already taken place and a lot is still being done in various parts of the country. It is, however, difficult to arrive at a consensus as to what extent such reforms could be carried out, given the constitutional provisions for property rights and more importantly, the domination of property owning class and wealth capitalists in the decision making process. In the Indian context, the socio-economic settings which is characterised *inter alia*, by both federal and democratic polity and mixed economic structure, the different aspect of property relations ought to be reckoned with in proper perspective. Nevertheless, it has rightly been argued that the elite group should make a concerted efforts to create such conditions which would increasingly help involve peasantry class as agents of change in the process of development. This would however require both strengthening of rural based development personnel who may be responsible for implementing the programmes and mobilization of target groups so as to increase the responsiveness of the latter in order that optimum results could be attained. This aspect has been clearly brought out in another article on rural development personnel.

Public Distribution System, as examined in the book, has been one of the major policy measures for ensuring efficient delivery of some of the essential consumer goods at reasonable price, to the weaker sections of the society. An assessment of the performance of the system over the past two decades indicate several deficiencies and shortcomings which largely emanate from administrative inefficiency (including corruption) and mis-management of the distribution system. It has therefore been rightly suggested that a proper re-orientation of the system is a must with a view to ensuring effective distribution of the essential goods which largely serve the interest of the poor people.

The articles devoted to describing the patterns of development, in part-III, are seemingly imbalanced in their coverage. Out of the five articles, four deal with agricultural aspects of India's growth (including one on the development of hill regions in a state), the remaining one is devoted to discussion on rural industrialization. None of them has examined the overall inter-regional and the nature of sectoral change over the plan periods; the study of which is imperative for drawing a well conceived policy conclusion. While examining the impact of drought on production of food grains, it has been suggested that Agricultural Stabilization Tax-Expenditure Scheme (ASTE), which is in essence a crop insurance scheme should be implemented so as to protect the interests of crop growers. Under this scheme 'the sum of premia collected should equal indemnities paid over a period'. Though the scheme appears to be laudable, it raises a number of questions about its implementation aspects which unfortunately, has not been cared to examine, while making this proposal.

The comparative study on growth of agriculture in Punjab and Haryana has clearly revealed, as may be expected, that agricultural output is positively associated with the extent of use of modern inputs. The study has moreover shown that the gains in output may get neutralized if there is large increase in agricultural work force.

The article on the development of hill regions ignores many vital points while arguing in favour of the development of such areas, though it rightly lists down the positive gains from hill regions. The unit cost of development in the areas characterised by hill regions is generally so high that the different criteria which determine the allocation of resources across the regions do not favour massive deployment of funds in the areas where from the returns are relatively non-optimum. This problem is faced particularly in a resource deficient country like ours. Ever since the Fourth Five Year Plan, all the hill and tribal regions have been classified under special category states and are given special treatment by the centre in regard to the distribution of central assistance. The examination of the impact of such measures would have been useful than merely cataloging the reasons for huge plan outlay in such region. After all, a high magnitude of resources which is sought to be diverted to the backward regions is to be drawn largely from the advanced regions. Therefore, at the initial stages of development relatively potential regions ought to be developed at an appropriate pace. The article dealing with the development of hill areas in Uttar Pradesh has unfortunately ignored this vital aspect.

One of the approaches of rural development is no doubt to pave the way for speedy rural industrialization which, in turn, is contingent upon some of the essential infrastructural facilities like power, transport and communication and markets etc. Besides this, in the present age the extent of industrialisation is heavily dependent on the application of scientific knowledge and up-to-date technology. In a country where more than 60 per cent of people are illiterate and, of which, a considerably large proportion live in rural areas, how can we expect rapid industrialization without having extended adequate infrastructural facility and without having provided required minimum level of education and entrepreneurial capacity? While the need for rural industrialization should not be underrated, the essential pre-requisites ought to be met so as to expedite the process of rural industrialization.

Moreover, the existence of some of the giant oligopolistic firms would entail effective protection of rural industries from the sweep of competition posed by non-rural based manufacturing concerns. This problem could possibly be tackled through effective regulatory measures for demarcating lines of both the products as well as technology between rural and non-rural areas in order to ensure that the use of a relatively high technology and modern managerial capa-

city of the latter do not encroach upon the industrial activities of the former areas and take undue advantage. This however is not so easy to do, especially when political will is lacking.

The last part, IV, runs under the heading of Trade, Fiscal and Monetary Policies for Development. There is however no attempt in any one of the articles to assess the economic performance in the light of the relevant policies pertaining to India's foreign trade and fiscal and monetory policies even though this part is devoted to examining this aspect. Probably, none of the articles included in this part of the book, intended to attempt to make policy analysis, though the theme chosen for discussion has been ably dealt with in some of the articles.

In the recent times there has been world wide discussion on international economic relations. The major issues in inter-country trade relations are duly highlighted in one of the articles, as may also be found in the documents of certain international U.N. agencies.

While the paper on the states' plan finance reads well and advances the argument that federal transfers have been increasing over the years and are generally progressive, it reflects a somewhat biased view, in favour of the centre, by ignoring the fact that : (i) the aggregate financial transfers to the states on all accounts as a proportion of the total national resources has been steadily declining in the recent times;(ii) the performance of the centre in mobilization of resources has been relatively poor than the states; and (iii) the statutory powers of the centre in raising internal and external resources are more than the powers enjoyed by the states (Yojana Sept. 16, 1984). Since the author's analysis in the book has been trickly presented, the arguments may not be tenable by most of the state governments, including those ruled by the same party which in power at the centre.

The discussion on taxation policy and integration of monetary variables in the growth models, in the subsequent three articles, are of academic interest and a voluminous literature on the related subject can be found every where. In these articles there is no worthwhile original analysis which might have a bearing on policy planning in India.

The last article on sectoral shifts in employment across the regions is unduly grouped in this part which is not devoted to regional analysis. Surprisingly, the article concludes that the effects of population on agricultural employment and productivity is almost neutral over the years. Contrary to this finding, another exercise presented in the book and as already commented upon above, has demonstrated that increase in population has adverse impact on both employment and agricultural output. While examining the determinants of employment patterns and interpreting the results, the *a priori* justification of the multiple-regression equation, from which the conclusions are drawn, should have been ascertained. The findings of the study that the pattern in employment has been shifting from agricultural to non-agricultural sectors is duly corroborated by other studies also.

In this part of the book some attempt to empirically examine the savings and investments behaviour in the past would have been of immense value from the point of view of both to justify the coverage of the book and to provide useful literature to users. Likewise, the study of potential capacity of the Indian economy and the methods by which the emerging needs of the country could be financed would have been a welcome addition.

It may be hoped that the second edition of the book, if brought out, would duly incorporate the changes indicated above and would focus on the problems which the title of the book i.e. economic policy and planning in India, encompass under its purview. An attempt in this direction would indeed be good endeavour to commemorate late Professor Baljit Singh. While the editors effort to compile rich materials at one place is commendable and is extremely useful for students as well teachers, the price of the book at Rs. 200|- is too high and is therefore beyond the affordable capacity of many students who may necessarily like to benefit from the book. □

HUDCO loans for rural housing

The Housing Urban Development Corporation (HUDCO) sanctioned an amount of Rs. 183.58 crore for construction of rural houses during the Sixth Five Year Plan.

Out of 8,65,983 rural dwellings in various States sanctioned by HUDCO during the Plan period, 5,80,377 dwelling units had already been completed and another 1,55,846 units were in progress. □

Production and export of tea

THE TEA BOARD in consultation with Tea Industry has formulated proposals for increasing tea production from a level of 645 m. kgs. per annum to 760 m. kgs. in the Seventh plan period.

The proposals envisage an investment of Rs. 900 crore on various measures such as extension, planting, replanting, rejuvenation, soil and water, management of factory, modernisation and research. Achievement of this target will enable India to maintain its predominance in tea production and exports. □

Strategy to meet demands for steel

THE PRODUCTION from the integrated steel plants is being stepped up and during the current year itself the public sector steel plants are expected to put an additional half million tonnes of steel into the market. This is to ensure that the steel requirements of consumers in the country are met fully.

Another half million tonnes is expected to be produced by mini steel plants and re-rollers. As such, indigenous availability would go by about a million tonnes in 1985-86 as compared to the previous year. The balance of unsatisfied demand would be met by imports and the flow of imports is monitored so as to ensure that there is no glut as it arose in 1983-84.

It had become somewhat more difficult to serve the needs of smaller consumers in recent years because of the decline in availability of piecemeal wagons from the railways. Steel Authority of India Limited (SAIL) needs approximately 35 per cent of its wagons as piecemeal wagons to meet demands of consumers who needed less than rake loads. However, SAIL had only been getting about 20 per cent in the form of piecemeal wagons.

The Government is engaged actively in taking steps to bring about an improvement in the performance of SAIL. The chief executives of the steel plants are being given greater freedom of action and along with this accountability is being more strictly enforced. Government is determined that the steel plants should operate on commercial line as far as possible and that managers are given the freedom to manage. It is only on this basis that accountability can be enforced effectively.

With the commissioning of additional capacity of Vizag, Bokaro and Bhilai steel plants, the present gap between demand and supply which is 1.5 million tonnes, will come down to .5 million tonnes by 1990—95. However, unless additional capacity is created in the country, the gap between demand and supply by the year 2000 would go up to 5 million tonnes. The Government is planning to liberalise the licensing policy for private sector mini steel plants based on modern technology so that they can grow and help to fill this gap. □

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To improve working of IRDP at block level !

A HIGH POWER COMMITTEE in the Planning Commission is looking into the question of improving the administrative set-up both at the block level as well as the professional technical services level for the implementation of Integrated Rural Development Programme (IRDP). This Committee, whose tenure has been extended up to December, 1985, would suggest infrastructural set-up for a number of programmes already announced apart from suggesting steps to involve democratically elected institutions at the local levels for the formation and implementation of these programmes during the Seventh Plan period. The Committee would also study the feasibility of decentralised planning at the district level with a view to integrating rural development schemes with the local development programme.

Though over 49 per cent of the sample households below the annual income of Rs. 3,500 have crossed the minimum income level as against the target of 30 per cent, the Government has identified a number of infrastructural bottlenecks.

During the Seventh Plan period, the efforts would be to ensure effective implementation of IRDP, especially the problem of integrating beneficiary-oriented programmes with area development programmes and with the development of agriculture in the rural areas as a whole.

Under the IRDP, 35 lakh households have been covered by 1984-85 as against the target of 30 lakhs. The overall number of families covered during the Sixth Five Year Plan 1980-85 have been over 15.4 million as against the target of 15 million. The Scheduled Caste and Scheduled Tribe beneficiaries which form the poorest segments of the rural community have been benefited from 28.6 per cent in 1980-81 to 44.17 per cent in 1984-85, thus crossing the stipulated target of 30 per cent.

The Plan expenditure on account of IRDP, though lagged behind the target during the initial years, increased in the later years. Credit mobilisation also went up steadily from 289.05 crore in 1980-81 to 836.28 crore in 1984-85.

During the Sixth Plan, the IRDP benefited a total number of 16.5 million families or a population of about 80 million. The number of villages covered under the programme was 5,86,000. The total number of villages in the country is a little over 6,00,000. □

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