

Prof. Kirit S. Parikh

Friends, I am delighted to be here for a number of reasons. One is I spent eight wonderful and productive and fruitful years at IIASA. I am also very happy that India has become a member of IIASA. I've been trying to get that done for 30 years but finally we did it.

What I would like to talk about today is that at IIASA I was with the Food and Agriculture Program, and that program's goal was really to say how to end hunger in the world, what kinds of policies and actions we should take. We recognized that right to food is in the UN charter and that hunger is the worst form of poverty and deprivation and that IIASA's Food and Agriculture program was one of its major programs then. And it addressed the issues: What is the nature of the system? Why does hunger persist despite every signature appended to the UN charter says the right to food is given to everyone? And what kind of policies can be effective?

I think what we did was rigorous way, as we wanted to analyze this issue. We developed a global modeling system called the Basic Linked system, which had 34 general equilibrium policy models with econometrically estimated parameters, linked together in a general equilibrium sense. So in the whole system there was no free lunch; there was no unaccounted-for sources of supply, or unaccounted-for things. And that made really very clear that the world food system is really resilient for the rich but stubborn for the starving. No matter what you do, the poor always bear the burden. If there is say any drought in the north, or say, drought in the south, it's the poor in the south who always suffer. We also recognized that we examined the debt system as well as a number of the suggestions that were made at the FAO's World Food Congress in 1976 and found that many of the suggested solutions did not really work. For example, more food production is not the answer. More purchasing power for the poor—one of the scenarios we did was to assume there is a mythical country called Helpland which gets 50 million tons of wheat sold on the market every year; it gets it like manna from heaven. And it sells it no matter what the price is. What happens is that very little change takes place. Initially, there is a fall in price but the world food system adjusts, rich countries feed more wheat to their animals, put more on the stock, change from wheat to corn, and so on. And very little of the food reached the poor. So the question is what can we do?

We also examined agricultural trade liberalization and what would happen if, say, the rich countries liberalized and we found that very little impact of liberalization taking place. In fact, some of the poor countries suffer much more from agricultural trade liberalization. Finally, we really thought that maybe we can find some win-win solutions and we realized that if you have free trade in agriculture and along with additional aid given to the developing countries, then you would find a win-win solution. The gains to developed countries, the OECD countries, were larger than the aid that they gave. The gains were larger to compensate the farmers who lose out in agriculture trade liberalization and a significant reduction of poverty and hunger can take place. And of course free movement of labor would also make an important difference in hunger terms. One has to recognize the enormous accomplishments of the Food and Agriculture Program. It gave us a clearer understanding how to deal with poverty and

underdevelopment, and many national models and modelers have contributed significantly to national and international policies. Some of the examples are India, Bangladesh, Sweden, Finland, Canada, USA, EU. In all these places the modelers involved with the FAP Program have made significant contributions to policies. Also in the FAO and the Uruguay Round discussions, the FAO programs helped.

I think IIASA networks can be very effective and powerful in bringing an impact on global and important national issues of policy. But what I would like to discuss is really hunger, is something perhaps we know now how to deal with, but hunger is only the worst form of deprivation. There are many other dimensions of deprivation and exclusion. If you don't have food, you suffer from hunger. If you don't meet your other needs, you think you have consumption poverty. But if you have enough food and other money to buy other things, but if you don't have good health and literacy to know the opportunities that they exist, you have capability poverty. And even if you have all of these but public goods and services are not available, then you cannot function. And similarly if you don't have the ability to survive shocks, if you don't have the support of social and environmental capital, you suffer from insecurity. And if you can't have surplus to invest so that you can look to a better future, you may have hopelessness and despair. And finally, the most important is freedom, inclusion, and empowerment, without which you won't have self-respect. The question is how do we go to a world where people have all these attributes. It's a difficult issue and one that needs much more comprehensive development. What I would like to do is to illustrate how India's five year plan, 11<sup>th</sup> five year plan which began early this year, how we hope that it can bring faster and more inclusive growth.

Our strategy is to provide education for empowering people, healthcare for expanding capabilities, infrastructure to enable functioning and economic growth to enlarge opportunities. Education for empowerment is extremely critical. We have made elementary education compulsory and free and have 100% enrolment under total literacy campaign was accomplished in 2006–7, but the dropout rates are still large. 31% of the children do not complete 8 years of schooling. Teacher attendance and teaching quality is poor. There is a lot of teacher absenteeism. Local school management committees, early childhood education, and greater use of computers, especially for disadvantaged children, are some of the strategies that we think can deliver better educational outcomes. But primary education or elementary education is one thing; people do want to go on to secondary education after they have completed that, and so we are mounting a second new mission on total literacy campaign so that children over ten are covered, and perhaps we could consider a voucher system to enable the poor to access private schools.

Important also is vocational education, where we would like to expand the number of skills that are taught there. We need to give financial and administrative autonomy to industrial training institutes. We need to initiate agriculture and global processing skills. And vocational training should be treated on a par with secondary education regarding status and resources so that people have an incentive to go to these and take the training. But at the same time we feel high education is equally important it is critical for an ICT-Driven—that is Information, Communication, Technology-driven—knowledge

economy. We need to expand the university system, open education to increase access from 8% of the group to 20% of the population who should go through higher education, and we want quality faculty and greater autonomy. This will be accomplished through increased budgetary support, by raising fees and also providing much more scholarship. Science and technology are equally considered important. We have a national science and technology commission. We will establish world-class research facilities, expand the facilities that we have, promote scientific research as a career, and revamp the service conditions of scientists so that more people will now go to science education, and science teaching, and science as a profession, something which is currently not taking place.

But health care is also equally critical for expanding opportunity. We have mounted a National Rural Health Mission, where integrated district plans for health, including drinking water, sanitation, and nutrition will take place. We will appoint health workers in each village; we will involve nonprofit sector; we will integrate Indian Systems of Medicine because there are many practitioners of these systems of medicine that are available in rural areas. Finally, social and community-based health insurance schemes will be provided. Here, clean energy is also considered an equally important element of health, and we have proposals to give entitlements for clean energy to every household using clean fuels such as kerosene or bottled gas.

Clean water for all is as important for health as perhaps health services. Currently, only 95% of the villages have clean drinking water. But large number of villages often slip back and there are serious villages with serious water quality problems. We want to rely much more on surface water sources; we will emphasize community owned and managed projects to make sure that the systems built and created continue to function. We have a total sanitation campaign to see that all villages and all households have really total sanitation facilities of a certain level. And what is happening at the moment is that we had only 4% of the villages covered in '88, and now 35% have been covered.

Rural infrastructure is very critical because without that one cannot function. A fully centrally funded time-bound program has been created to have 10 million hectares of additional irrigation in the next 5 years, all with road connectivity to the 66 thousand missing habitations, 60 lakh (6, 000,000) houses constructed for the rural poor, provision of drinking water supply to all uncovered habitations; we will electrify all unelectrified villages, and connect all the remaining villages' public telephones. Faster growth for creating opportunities is the major theme. 9% growth domestic growth GDP Product target is what we have. And we have accomplished in the last four year 8% plus growth. We want to step up agriculture growth rate to 4%, and we think we need an open economy for efficiency, for labor intensive development, and we have enacted a Right to Employment Act which provides guarantees employment in rural areas at least for 100 days a year to every family.

I think the main challenges here are to ensure outcomes. We know what we need to do. We even have some ideas of how to do it, but how to make these things efficient, how to make our programs deliver outcomes is really the main challenge, and I think the main elements of this strategy that we are trying to follow are decentralization, financial

empowerment, stakeholder participation, and accountability through a Right to Information Act. And Internet for every program. Whatever the ministry says it has done, the name of the village connected with water or road or electricity is put on the Internet and with help from civil society organizations, and public/private partnerships we think we can offer choice to people, we can reduce leakages. I think with this we hope to go beyond hunger to total human development, and if developing countries are helped to follow such a comprehensive strategy, I think we can have a world without deprivation and despair. Approaches for effective delivery require systems, framework, the thinking on this, how to account for various stakeholder concerns, how to pull these things together, how to improve governance to make it more effective and efficient. These are the challenges, and I hope IIASA can take up some of these. Thank you.