

SAARC Agriculture Vision 2020

BACKGROUND

1. SAARC Region is broadly classified as low-income or, low-middle income category in global parlance. While poverty and hunger remain one of the major challenges before the region, Agriculture is remains the predominant sector of the region's economies. A vast majority of population in the region lives in rural areas and depends upon agriculture for livelihood and sustenance. Despite rapid growth of some of the economies in the region, dependence on agriculture, as primary occupation, has witnessed little decline whereas future growth of agriculture sector is critical to eradication of poverty, livelihood security, reduction in hunger and promoting sustainable and inclusive growth of the regional economies.

2. Region-wide agriculture is facing several challenges, threatening its growth and sustainability. The physical and economic environment in which agricultural activities are undertaken is changing rapidly and getting complex. This necessitates preparedness to face upcoming challenges and unfolding new reality. Many changes affecting agriculture transcends geography and are trans-boundary in nature: climate change, trans-boundary animal and plant diseases pose formidable challenges which require strong regional cooperation to face. 'SAARC Agriculture Vision 2020' would help maximize benefits from available options, enhance ability to face threats and new challenges and to harness the opportunities forthcoming.

OBJECTIVE

3. Develop science based strategy for collective response to threat, challenges and opportunities and global shocks, based on ground realities of SAARC countries.

GROUND REALITY-SAARC Region

4. The Region is home to 1.567 billion people (23.7% of global population). The share of the Region in terms of global land and water resources is however much lower than the population share e.g. Region's geographic coverage is mere 3.95% of the global land mass. Because of high population pressure on land, percentage of arable land to total area is much higher than the global average e.g. the share of the region in global arable land is 14%. The region also has very high incidence of poverty and hunger. Based on the country-wise data (ref. Asian Development Bank), it is estimated that 451 million people in the Region live below poverty line; and proportion of these hardcore people in the total population is 28.83%. The principal reason for high incidence of poverty in the region is low per capita income and inequitable distribution of income: with 23.7% share in global population, the region has only 2.62% share in global income.

Low Income, High Poverty, Under-nutrition

5. Per capita Gross National Income (GNI) in the eight Member States ranges from \$345 to \$3,277: lowest Per Capita Income is in Afghanistan while the highest is in Maldives. Per capita GNI in India and Pakistan is around US\$ 1,000. Low level of income is one of the primary

reasons for wide prevalence of poverty and severe under-nutrition. Poverty in the region varies between 21% - 53% while 17% - 30% of population in different countries does not consume minimum level of globally recommended dietary energy.

Predominance of Agriculture

6. Majority population in South Asia lives in rural areas, depending on agricultural activities as their principal source of income and employment. Share of rural population in total population varies between 66% in Pakistan to 86% in Nepal. Except for Maldives, share of agriculture in total GDP varies between 16.5% - 40% (approx.). In Maldives, less than 3% of total GDP is contributed by agriculture. Due to low productivity of agriculture, per worker income in agriculture is low and, as a consequence, the proportion of population living under poverty is quite high.

7. Agriculture farming in South Asia is dominated by small holdings i.e. average size of holding is below 0.5 hectare in Bangladesh, below 1.0 hectare in Sri Lanka and Nepal. In India, average farm size is 1.41 hectare. Pakistan is much better endowed with land resources (average farm size is 3.0 hectare). Except Pakistan, holdings below one hectare account for more than 60% of total farm holdings.

8. Small size of holding is reflected in very low land to labor ratio. Except Pakistan and Afghanistan, one hectare of arable land supports more than one agriculture worker. Close to five workers draw their livelihood from one hectare of arable land in Bangladesh and Nepal. Another disquiet aspect of agriculture is increasing dependence on land for livelihood in all the countries, as manifested by rising ranks of workers per hectare of land.

9. Another serious disadvantage faced by the farmers in the Region is heavy dependence on rain-fed agriculture. Area under irrigation as per cent of arable land is around 33% in India , 39% in Sri Lanka , 47% in Nepal and 56% in Bangladesh . In Pakistan however, 90% of agriculture is under irrigation.

10. Livelihood security, eradication of poverty, reduction in hunger, and sustainable and inclusive growth of economy of each country thus critically hinge on the future of agriculture.

Agricultural Productivity

11. Cereal and pulses are the main staple region-wide. Per hectare yield of main staples in all the countries is however lower than world average. Growth rate in productivity is also low. Agricultural output growth has slowed down in most of the countries and, in other countries where growth is still at reasonably high level, it is becoming increasingly difficult to maintain that. Despite the high potential, agricultural productivity is getting stuck at low level and increase in productivity requires increased use of inputs. This is lowering efficiency of production and diminishing profit margins.

MAJOR CHALLENGES FOR REGIONAL AGRICULTURE

Increase and sustaining agricultural growth

12. Growth rate of agriculture in SAARC region is low and unstable. Whereas total GDP in most Member States has shown high growth in the recent past, except for Nepal and Sri Lanka, total GDP of other SAARC countries increased by more than 5% per annum over the first six years of the present decade. Gap between growth rate of agriculture and non-agriculture sector is rising in all the countries.

Disparities between Agriculture and Non-Agriculture sectors

13. Labor force in agriculture is not shifting to non-agriculture sector despite high growth of the latter. As a result, per capita income in non-agriculture sector and urban areas is rising at a much faster rate compared to agriculture sector and rural areas. This raises concern over equity; and is adversely affecting the interest and investments in farm sector. Such inequality could be addressed in two ways: (i) by shifting workforce from agriculture to non-agriculture sectors; and (ii) by raising overall growth in agriculture sector. Both the options are important for reducing income inequality and poverty in the region.

Poverty, Hunger, Under-nutrition

14. Reduction in poverty and under-nutrition is slow in most of the countries. Concerted efforts need to be put to meet the Millennium Development Goals (MDGs) and SDGs – to which all SAARC countries have committed. Agriculture growth is necessary condition for access and affordability to ensure food and nutrition security.

Natural Resource degradation

15. Natural resources i.e. land, water and ecosystem are showing symptoms of degradation and fatigue and causing adverse effect on sustainability and prospects of future growth.

Climate Change

16. Climate change is now an accepted reality and, in some cases, is predicted to cause heavy damage to the Region. South Asia is among the most vulnerable regions in the world to natural disasters related to climate change. Two main dimensions of climate change, that would impact agriculture, are increased temperature and changes in precipitation pattern. These changes, taking place on a global scale, would impact local agriculture and therefore affect the local and global food supply. Its difficult to precisely estimate how farming might be affected in different regions, as the impact on the agrarian economy in a given region / country will depend upon the interplay of the dynamic factors specific to each area.

Energy scenario

17. In the context of deepening energy demand-supply imbalance, diversion of crops for use as feedstock for bio-fuel, especially in developed countries, is a growing concern. As future of all economic activities would be shaped by energy demand-supply, production choices, methods of production and product movement may become unpredictable. Energy solution in one part of the globe is causing more serious problem elsewhere e.g. rising energy prices are directly impacting food prices in several ways through increase in prices of agriculture inputs namely fertilizer, pesticides, insecticides, increase in cost of operation of farm power and machinery, increase in

transport cost. While agriculture is seen to have potential to provide an alternative to rising energy crisis, future course of agricultural production also considerably depends on global crude oil prices. Agriculture production would be required to move towards less energy-intensive production system in the future.

Bio-safety, Bio-security

18. Vulnerability and susceptibility of agriculture production are rising and resilience is declining. Plant and animal species are getting vulnerable to pest and diseases, sometimes turning into epidemic proportion causing large-scale destruction. Many of such occurrences are not confined to a particular location or to limited geography but are of trans-boundary in nature. Mechanisms to deal with these threats are either missing or weak.

OPPORTUNITIES

19. New opportunities are arising on account of choice of technology, change in demand patterns, surge in value chains and supermarkets, revolution in Information & Communication Technology, institutional innovations, and globalization. Trade based on comparative advantage is also offering many opportunities. Agriculture research is getting increasingly capital intensive. These necessitate sharing of technology and resource in research, extension and infrastructure. Opportunities are also unfolding in green energy and bio-fertilizer.

20. If physical, ecological and socio-economic environment in which agriculture production takes place is not managed judiciously, it could lead to serious consequences in terms of production, food and nutrition security, vulnerability, economic stability, well-being and even survival of the majority population. The Governments need to reflect upon the emerging scenario in and around agriculture; and prepare a medium and long term perspective of agriculture in the region to adjust to emerging challenges and opportunities being faced by the agriculture sector.

21. This Perspective/Vision attempts to visualize how agricultural scenario would evolve in the near future and what policies and strategies would be appropriate to adjust to the emerging changes and to harness their potential.

22. SAARC Agriculture Perspective/Vision 2020 should develop a consequential strategy to achieve stable and sustainable output growth, meeting diverse requirements of the society - and based on proper assessment of the emerging opportunities and challenges. A road map should follow to adapt to climate change and prepare for escalating energy prices, diseases and pests outbreaks, bio-security, bio safety, bio-diversity and IPR requirements.

Producers and Production Base

23. No productive activity can be sustained in the long run by overlooking the health of the production base and the producers. The Region thus needs to focus on farmers and natural resource system or, agriculture production base i.e. land, water, vegetation. Policies focused on farming ignoring their implications on the farmers are not sustainable. Growth and development of farming therefore must improve welfare of farmers.

Output Growth Acceleration

24. Agriculture growth not only helps address poverty within the sector, but also promotes employment in non-farm rural activities and facilitates migration to non-agricultural avenues without causing distress. Growth in agriculture and overall rural development are thus essential for reducing poverty - not only by raising income of the poor, but also by checking escalation in food prices and keeping price of wage-goods low. This recognition calls for a shift in emphasis from 'growth' per se to 'inclusive growth'. Empirical evidence suggests its agriculture growth which has greater impact on reducing poverty than non-agriculture growth.

25. Growth in output and farm income depends upon a numerous factors viz. prices of output and inputs, non-price factors. Raising growth requires remunerative pricing environment for output, access to improved technology, application of quality inputs and machinery. Further, growth has to be achieved from a shrinking natural resource base i.e. growth would come largely from increase in productivity.

26. Much scope exists in raising farm output and income by diversification towards horticulture (fruits, vegetables, tuber crops, spices and medicinal and aromatic plants), livestock and fisheries.

Technology

27. Technology is the prime mover for growth. Considering the costs and constraints of resources e.g. water, nutrients and energy, genetic enhancement of productivity should be coupled with 'input use efficiency'. This can be made possible only by utilizing full potential of the existing improved technologies; and by developing newer technologies.

28. Large gaps exist between what can be attained at farmers' fields with adoption of improved technology and what is obtained with the existing practices followed by farmers. Potential for raising output through effective dissemination of technology is considerable. Its constrained owing to absence or, weak Research-Extension-Farmer linkages. One primary reason is lack in marketing of technologies. As public extension system is proving increasingly inadequate for dissemination of technology, there is a need to involve private sector in marketing and dissemination of technology. This would require increased public-private sector participation through appropriate returns and incentives for the innovators and disseminators.

29. Several Multi National Companies (MNCs) in developed countries are investing heavily in bio-technology; and are expected to come out with new seeds, inputs of high commercial value. There should be appropriate mechanism to access these frontier technologies and to ensure that costs of such technologies are affordable by the farmers.

Seed and other Inputs

30. Quality seed is another primary determinant of productivity. Harnessing benefit of technology requires well-developed system for sales and distribution of seeds and plant propagation material. In almost all SAARC countries, supply of seed and plant propagation material is highly inadequate to meet the emerging and growing demand. The advantage of this is being taken by unscrupulous private trade. Development of a competitive and regulated seed industry, by involving private sector in seed production and distribution, is a critical imperative.

31. The existing production farms are not able to cater to rising demand for fertilizers, agro-chemicals and other inputs. The region may consider more Foreign Development investment (FDI) inflow in these areas as domestic corporate sector is also found to take interest in these new ventures when there is challenge from outside.

Food Requirements

32. Long-term trend in consumption pattern at household-level demonstrates that per capita direct consumption of food grains has been on decline; and that of livestock and horticulture products has been on rise in most of the SAARC countries. Despite shift in dietary pattern, food grains are considered to be important for household food and nutrition security on four considerations: cereals and pulses are staple foods and there is no perfect substitution between staple foods and other foods; owing to inadequate level of intake of almost all foods, increased consumption of other foods, in most cases, fill dietary deficiency; food grains are the major and cheapest source of energy and protein as compared to other foods, and are thus vital for food and nutrition security of low income masses; increased production and consumption of livestock products resulting from rising per capita income require high growth in use of grain as feed for livestock. Food grains/cereals thus continue to be central to ensuring food security in South Asia . Any disruption in production leads to deep price shock and adverse impact on common people.

33. Demand projections for South Asia for low-income and high-income scenarios demonstrate that demand for cereals in the region would grow at 1% and pulses by 1.7% per annum; demand for edible oil is projected to grow by more than 1.6%; demand for fruits, vegetables and livestock to rise by approx. 3% or more under high income scenario.

Sustainable Use / Management of Natural Resources

34. Agriculture is the main user of natural resources and it affects land, water, forests, soil conservation, genetic diversity of crop and livestock and other ecosystem services. However, land and water resources need special attention for their sustainable use as they show increasing signs of stress / degradation in all countries. Improving natural resource management requires right price signals to farmers, strengthening property rights and strengthening of Natural Resource-based institutional arrangements i.e. devolution of control to local organizations for community natural resource management.

35. Better technologies and efficient ways of managing water and modern farm inputs are now available to make farming more sustainable. But, their widespread adoption is hindered by inappropriate pricing policies, insufficient training of farmers and a failure to manage negative externalities. Many opportunities exist to harness agriculture's potential as a provider of environmental services. The emergence of new markets and programs like 'carbon credit' for payments for environmental services and 'green energy' manifests high promise; and should be pursued by local and national governments across the Region.

36. Resource-conserving technologies are now available for various ecological regions. These can be very helpful to save water and energy, reduce cost and increase farmers' income. Adequate emphasis and investments are required to harvest and conserve rain water and optimally use available water.

37. As water is emerging as the main constraining factor, particular attention needs to be given to check its wastage. Rainwater going waste needs to be harvested and conserved. Major emphasis is needed on water conservation and recharging schemes, including restoration and renovation of traditional water bodies, as an integral part of watershed development with the involvement of local communities and NGOs (Non Government Organisations). A paradigm shift is needed in promoting agricultural productivity – not only per unit of area, but also per unit of water and time.

38. Water being a Common Pool Resource serving a large number of users, it's impossible to monitor the behaviour of individuals to ensure that its use is efficient, equitable and sustainable (from social viewpoint). Strong governance is essential but not sufficient. Therefore, institutional changes to improve overall water governance need to be reinforced by creating strong incentives for individual users to make prudent and economical use of water. Increasing effective cost of water for individual users and aligning the relative costs for different uses to serve social priorities is essential.

Farm Structure

39. Small-sized farms in South Asia face serious constraints in adopting modern technology and in marketing their produce. To some extent, the size disadvantage can be obviated through contract and cooperative farming. In most cases, the size of farm would remain unviable and insufficient to provide enough income for the farmers and their families. One way to raise size of operational holdings is to create suitable jobs in non-agriculture sector to attract or pull out unviable marginal and small farmers from agriculture sector. Experience of Developing Asia shows that Thailand and Vietnam achieved substantial reduction in poverty by shifting large workforce out of agriculture. During 1990-2005, share of workforce in agriculture in the two countries declined by about 20% i.e. a shift of more than 1% workforce from agriculture to non agriculture each year.

40. Unlike the experience of South-East Asia and the Developed Economies, high growth in SAARC countries is not leading to large shifts in workforce from agriculture to non-agriculture sector. The reasons for this seem to be: strong attachment of people in Asia with own land, native place and the society; and inhospitable and harsh conditions for migrants in the urban areas, particularly for unskilled low-wage labor. These can be overcome through industrialization in rural areas and by generating employment opportunities in non-agriculture sector in and around the rural growth centres.

Bio-technology

41. Some countries in the Region have effectively applied biotechnology tools to raise yield, reduce cost of production and improve quality of some edible oilseeds. These have imparted them significant advantage: the new bio-tech crops have drought-tolerant varieties, consume less inputs and water. The immediate benefit of success of transgenic is reduction in cost of production. However, these technologies involve environment and health risk due to which caution /safeguards are needed while adopting those. It's claimed, transgenic crops and genetically modified foods can play a crucial role in raising quantity and quality to address the future demand and food security; while others question suitability of such technologies for the

Region. Its observed, traditional germplasm and conventional methods of breeding are much superior to GM approach to improve nutrition quality and to enhance productivity of various crops. Furthermore, GM technology is expensive and has much concomitant hazards which cannot be checked through weak regulatory mechanisms prevailing in developing countries. In order to take advantage of future bio-tech crops, the Region need to observe and learn from experience of other countries which have successfully used bio-technology.

Adaptation to Climate Change

42. A wide variety of adaptive actions may be taken to face adverse effects of climate change on agriculture. Before that, each country/region need to know, with some degree of confidence, what kind of changes in temperature, rainfall and other climatic factors its likely to face. This should be followed by necessary adaptation and coping-up mechanisms. On-farm adjustments to climate change would require crop varieties suitable for late/early sowing, new cropping sequences, supply of seed and inputs on demand, water conservation, diversified production. All these call for investments.

43. Climate change is a global challenge. The regional countries need to collaborate to promote strategies to mitigate the risks associated with climate change. Agricultural adaptation to climatic variation i.e. from cereal crops to fruits and vegetable production require new types of market, credit arrangements and input supply chain. Similarly, greater demand on water and land – in response to climate change – would require different set of protective and regulatory policies and agricultural institutions. Success in adapting to possible future climate change will depend on a better definition of what changes will occur where, and on prudent investments and policies.

Energy Prices

44. Increase in price of crude oil, gas and such energy sources impact directly on food prices in several ways; through increase in prices of fertilizer and agriculture chemicals used as inputs in agriculture, increase in cost of operation of farm power and machinery, and increase in transport cost. While agriculture is seen having potential to provide an alternative to rising energy crisis, future course of agricultural production also depends considerably on prices of crude oil prices. There is incremental pressure to move towards less energy-intensive production system. Escalating prices of crude oils and compulsions to develop alternative energy sources lead to increasing use of food and agricultural crops for production of bio-energy in the form of ethanol and bio-diesel. Bio-energy is also seen as a cleaner fuel as it emits much less green house gases compared to hydro-carbons. The immediate impact of diversion of food crop and diversion of area from food crops to energy crops is felt in terms of food shortage and increase in food prices, which poses new food security risks and challenges for majority of small/marginal farmers.

45. Conversely, bio-energy production is believed to having potential to benefit small/marginal farmers and rural poor by creating employment and new market opportunities, provided appropriate technologies are used to make use of degraded or marginal lands for bio-fuel production. SAARC countries depend heavily on import to meet demand for crude oil and would be hit by increase in crude prices. These countries need to develop strategies to harness potential of bio-energy crops and tree species and develop technologies for use of agricultural waste and surplus for generating energy.

Food Prices – Challenges, Opportunities

46. High global food prices offer opportunity to increase food and agriculture production in South Asia. This could provide the best opportunity to improve income of small/marginal farmers and harness potential of agriculture in developing countries. At present, agriculture in developing countries is caught in a vicious cycle of low income – low investment – low technology – low productivity – low income. The reason being that agriculture prices in real terms have been declining since the beginning of the twentieth century notwithstanding their occasional increase. While keeping food prices low is helpful for poor, it should not end up affecting incentives to produce. High food and agriculture prices can convert vicious cycle in agriculture to a virtuous cycle, if high prices reach farmers and improve their income translating into high investment – improved technology – high productivity.

47. If increase in food prices does not percolate to rural poor and their incomes do not improve consequently, they would need strong Safety Net – either in the form of direct income transfers or, provision of subsidized food. Food security of such vulnerable segments should not become a binding force to maintain food prices at low level if it stifles production. High food prices resulting from increase in bio-fuel production or, other factors would help in raising food and agriculture production in several areas which have high potential for raising food production and where this potential is blocked due to low prices. This calls for ensuring efficient functioning of market – so that benefits of higher prices reach producers and vulnerable segments.

Food Safety and Food Standards

48. Consumer preferences for quality, variety and safety are rising rapidly. Modern trade and retail asks for conformity to specified standards and their enforcement, as these help in segregating product distribution to suit requirement of suppliers and consumers; and help ensure public food-safety. SAARC countries would need to upgrade and enforce standard(s) in line with changing consumer and trade demand. This would eventually help in better Sanitary and Phyto Sanitary (SPS) compliance and export promotion.

Bio-diversity, Intellectual Properties (IPs)

49. SAARC countries have very rich plant and animal bio-diversity. It holds significant potential for future commercial use. However, there is lurking danger of loss of bio-diversity and maintaining claim of ownership over it. Each country needs to urgently prepare authentic documentation of all kind of bio-diversity resources at various bio-ecological levels and initiate necessary measures to preserve the bio-diversity. Adequate attention is also needed on documenting and patenting Intellectual Properties and Traditional Knowledge related to agriculture and animal husbandry. Increased investment, on pro-active basis, in bio-diversity and intellectual property holds enormous growth potential for each country.

Bio-Safety, Bio-Security

50. Bio-safety is required to essentially protect human health and environment from possible adverse effects of the modern bio-technology products; as well as to promote safe laboratory practices, procedures, and proper use of containment facilities, equipment, risk assessment and risk management, evaluation of genetically modified organisms (GMOs). Provisions of global

Conventions and Protocols e.g. Convention on Biological Diversity (CBD), Cartagena Protocol also have influence upon bio-safety considerations. Issues related to bio-security of the Region are gaining significance in the changing global scenario. On regional plane, SAARC has to take adequate institutional measures for safeguarding the Region's bio-diversity and natural wealth.

Infrastructure, Research & Development (R & D)

51. While agriculture infrastructure remains weak in all the SAARC countries, priority accorded to public investments in agriculture receded considerably during the last two decades. Countries are also spending very small fraction of Agricultural GDP on R&D. Conversely, research in advanced Agricultural Science is getting increasingly expensive. However, in order to tap advantage of emerging market opportunities and technological breakthrough, SAARC countries ought to invest heavily in rural infrastructure (roads/ transportation, electrification, markets, water, land), R&D.

Technology Delivery System

52. Agriculture is fast becoming more knowledge-intensive, market-oriented and demand-driven. Extension is thus required in a systemic perspective: from production to consumption in a value chain mode. Conventional systems of technology-transfer are inadequate in the fast evolving agriculture. Diversified nature of farming demands, against economic liberalization and globalization, is radically changing the spectrum of service providers to farmers. Indeed, the private sector, farmers' organizations, cooperatives, self-help groups, para-professionals, non-governmental organizations, input suppliers and small agri-businesses are increasingly engaged in providing information and services. Increased reliance on private sector extension, however, does not imply a complete withdrawal of the public sector – which must continue to finance public goods' extension and information services and coordinate extension activities. There is a need to have a re-look at the basic extension strategy considering the strengths of both public and private sector. The extension system has to capitalize on the complementarities and harness coherent synergies between public and private sector. Further, 'Research– Education–Extension–Marketing' needs to be in a continuum.

53. Rapid development of Information & Communication Technology (ICT) and Telecommunication Network have paved way for creation of information network, knowledge pool and services on new agricultural technology, products and marketing of produce. These need to be used intensively. It's necessary to develop farmer-friendly information network /tools to provide whole range of information leading to delivery of knowledge of new agricultural technology, products, procedures and related services – to enable them to take control of their farming environment in near future.

54. Rapid spread of Information and communication technology (ICTs) in semi-urban and rural areas, especially the mobile telephony in recent times, coupled with continuing cost reduction in real terms, provides an unprecedented opportunity to utilize ICTs in serving farming community. In future, SAARC countries should focus on new ICT-mediated engagements in Research-Education-Extension continuum that promote greater ease of technology exchange among relevant entities and with farmers while improving farmers' opportunities for improved income and livelihood security.

Capacity Building

55. Development of institutional capacities for facing agricultural challenges and harnessing opportunities differ across SAARC countries. Some countries do not have sufficient trained manpower and institutional capacity to implement required programmes for achieving the objectives of the Regional Agriculture Vision. Thus, mechanisms should be put in place for these countries in capacity development for manpower and institutions.

Regional Complementarities and Collaborations

56. Some evolved challenges e.g. spread of plant and animal pests and diseases, climate change require cooperation – both at regional and global levels. While there already exists intra-regional cooperation in core areas of agriculture and livestock in training, sharing of best practices and capacity building, there is a need to strengthen and harmonize the existing SAARC institutional mechanisms.

57. Regional and sub-regional projects promoting intra regional cooperation and collaboration, both in short and long term, need to be identified: in areas of food production, food security, food safety, conservation of soil and water resources, bio-fertilizer, linking farmers to markets, strengthening of delivery mechanisms, intensification of farming systems, tackling animal and plant diseases. In such endeavors, focus and priority should be given to tapping local talent and local resources.

58. This Vision relates to the SAARC region as a whole. Its certain aspects are general in nature. Realization of this Vision would require actions at local, national and regional level; and specific strategies. Within the broad framework, each country would be required to follow area-specific strategies. This would involve clear understanding of area-specific linkages between new driving forces and operating environment and characteristics of agriculture. Each country, and the Region as a whole, should estimate linkages. Similarly, optimal combination of policies to achieve growth, sustainability, food security and poverty reduction have to be developed along with risk assessment involved in different types of options. Upon finding answers to the questions, SAARC countries would have to identify policy interventions that help in achieving optimal results. These policies would relate inter alia to investments, credit, incentive structure, trade, marketing, risk and insurance, technology and institutions.

ROAD AHEAD

59. Global community is witnessing strong surge of regionalism. As a consequence, countries in the neighborhood are contemplating different ways of cooperation to maximize benefit from available options; and ways to face new challenges and harness the opportunities arising. Thus, the number of regional groupings is rising; and regional cooperation is deepening. Growing interdependence among countries is putting further catalyzing such cooperation. Regional cooperation in agriculture should be the core strategy for implementing SAARC Agriculture Vision 2020; and this should focus around the identified challenges and opportunities.

60. The major challenges for agriculture in the region are to raise and sustain agriculture growth; ensure food and nutrition security; to face the challenge of climate change; adjust to changes in energy scenario; maintain bio-safety and bio-security; make sustainable use of natural resources;

and protect bio-diversity. The new opportunities lie in trade, marketing, bio-technology, shifting demand preferences in domestic and global market, technology sharing, resource-sharing and investments in research, extension and infrastructure. SAARC countries need to develop science-based strategy for collective response to challenges and opportunities and global shocks.

61. To that end, on a priority basis, a consensus is to be arrived at on identified areas for cooperation in agriculture; and then form partnership and institutional mechanisms to operationalise regional cooperation. Concrete areas for cooperation and action in agriculture sector within the existing SAARC arrangements should be put in place with focused strategy.