

*International Conference on Sharing Innovative Agribusiness Solutions:
From Farms to Markets, Providing Know-how and Finance
26-27 November 2008, Cairo, Egypt*

Submission Form – Innovative Agribusiness Solutions

The conference will present solutions in the agro/food business value chain (from farm to fork) that are viable and have the potential to be scaled up and/or transferred to other countries or regions, that is, solutions that are socially and financially sustainable, with potential for growth.

This form should be submitted by 30 September at the latest to allow sufficient time to review all solutions.

Conference theme focus

Please indicate the theme(s) to which the solution is relevant:

1. **Supply/value chains, market access and linkages:** Solutions that address gaps in the value chain, such as logistics, infrastructure, market intelligence and outreach, linking farmers or food processors, including small-scale ones, to retailers / markets.
2. **Compliance with standards and conformity assessment:** Solutions, such as traceability, which enable agribusiness actors in developing countries to comply with standards throughout the supply chain, including ones related to food safety and organic best practices. These solutions can help overcome barriers to trade and lead to increased exports.
3. **Technology and value addition:** Solutions based on utilization of a specific technology or process, adding value and increasing productivity. This can take the form of increased shelf life of the product and/or improved method for handling agricultural produce.
4. **Innovative forms of finance:** Solutions featuring unconventional forms of financing, both for business investment and technical cooperation, for example, specialty funds, new ways or tools for microfinancing, reaching a larger customer base.

I. Title of the Solution / Project

Integrated Agro Food Park (IAFP)

II. Contact person

Who is the presenter of the solution?

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III. Description of the Solution / Project

1) To which sector/s of agribusiness does the solution apply?

Dairy Aquaculture/ Fishing Horticulture Processing

Meat/ Poultry Other sector, please specify Spatial Planning and
Energy Optimization

Logistics: Cold Chain Warehousing Transportation

Mechanization Organic agriculture Market Info /
Intelligence

Other please name: Market Management

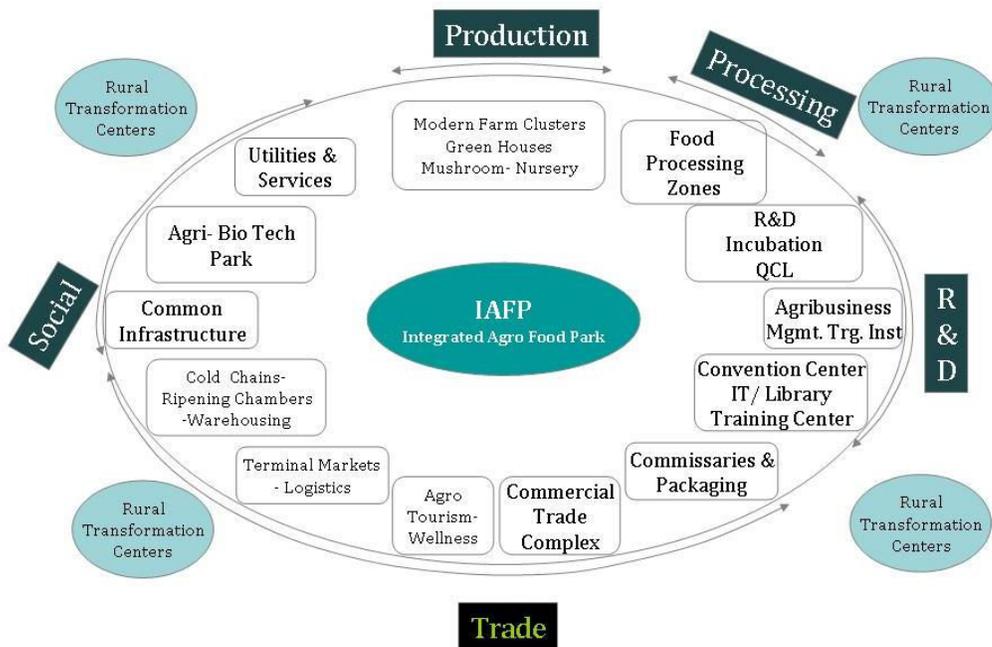
2) Please describe the solution /project.

The momentum in the agricultural sector across the world is changing for the better. Most of this change though at a nascent stage is transcending various components and sub-sectors of the agri - value - chain in many of the developing countries in the continents of Asia and Africa.

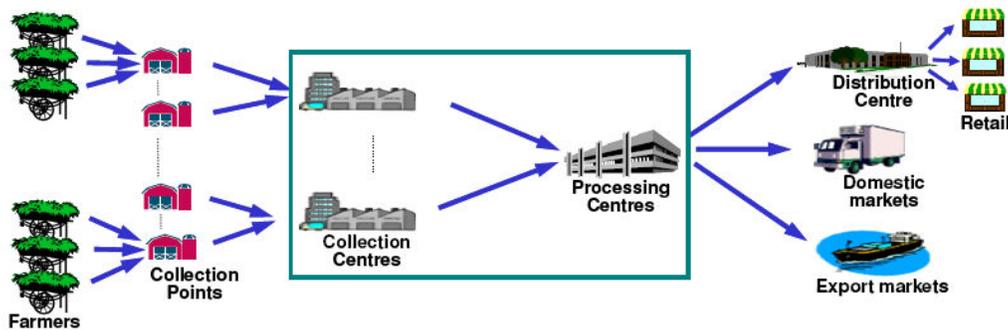
However, one of the key challenges faced by the sector today in many countries in Asia especially India is the disorganized and fragmented land holding pattern and thereby, limited corporate involvement and investment that is taking place. Lack of scale has led to the decreased competitiveness of the farmers who are as a result under-investing in technology (mechanization and scientific inputs). Further, the absence of an integrated channel to link the 'farm gate to the food plate' has prevented the transfer of the desired agricultural practices, materials, infrastructure and technology to the farmer thus, adversely affecting the availability of required processing varieties of farm produce to the industry. It is therefore that inability to tap the growing market, both in the domestic as well the international markets, has led not only to lost opportunities in the food processing sector but also to loss of value that could have otherwise accrued to the key stakeholders, the farmers.

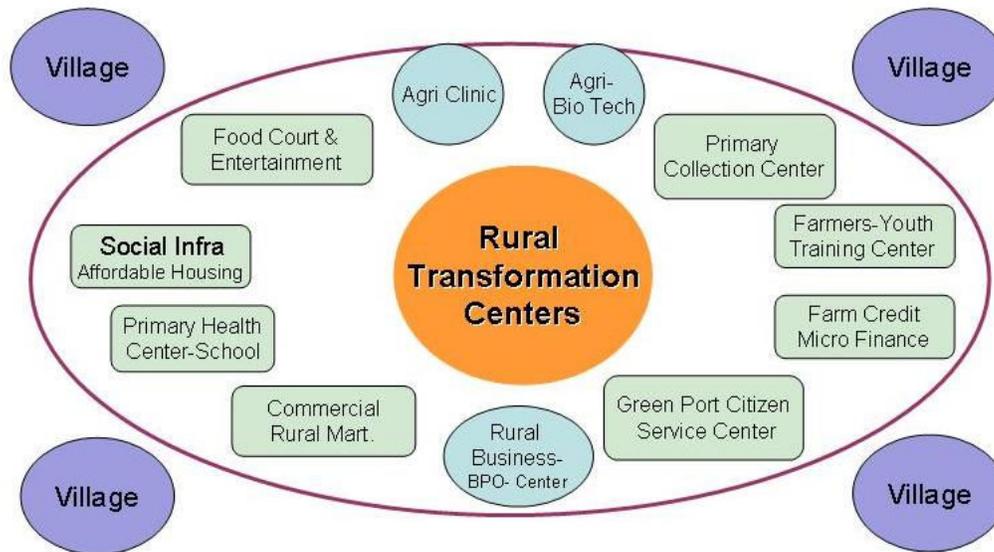
This problem can be effectively addressed by creating an appropriate platform of “Integrated Agro Food Park (IAFPs)” and linking it to the “Rural Transformation Centres (RTCs)” in the hinterland.

The IAFP’s with the world class facilities of hi-tech agriculture and processing would be linked to the RTCs located in the catchment area which would provide integral material supply linkage to the IAFPs and would integrate farmers with the demand side of the food chain in an efficient manner. This would help in lowering the costs by reducing the post harvest losses, transportation and energy costs. Given is schematic representation of the linkages in the value chain and various activities to be taken up at the IAFPs and RTCs:



Market oriented Food Production Chains





Technical know-how on the best management practices which will be shared with the farmers linked to the IAFPs as well as state-of-the-art processing technologies which would be made available in the park, will largely enhance the quality and thereby render increased acceptability and competitiveness of Indian foods in the international markets. These parks would ensure higher returns due to high quality output, off season availability, better traceability and enhanced productivity. The IAFPs can also act as a link up for Agri-biotechnology companies, grain trading and processing companies, and meat production and processing companies and farmers/ producers by working together to educate the professionals of the future and develop food science and technology at large.

For the successful implementation of the IAFP's, YES BANK, along with its strategic partner, Wageningen University Research Centre (WUR), have come together to implement the first IAFP in India.

The following is the status of the project:

- ♦ Identification of Anchor investor
 - IFFCO (the largest fertilizer cooperative in India) and Greenport Corporation (promoted by Indu Projects, a large project developer based in South India) who have come together as Joint Venture partners have taken up the role of anchor investors for this project and mandated the YES Bank -WUR consortium as project advisors.

- ◆ Identification of location
 - 1800 acres of land owned by IFFCO in Nellore district of Andhra Pradesh has been identified as the site for the development of the IAFP hub and 20 locations including and adjoining 3 districts around Nellore district have been identified for RTC development. Both were finalized after thorough assessment and feasibility analysis.
- ◆ Detailed project report preparation and Master planning
 - Feasibility reports for various agro processing and hi-tech Agri production activities is underway
 - A team of spatial planners and Agribusiness experts drawn from YES BANK and WUR have prepared the preliminary Master plan for the IAFP hub where the cluster of processing and production units would be located in an efficient and eco friendly manner

The common infrastructure development is underway with the land development and other activities already underway. An investor mission from Netherlands (primarily) is being planned in November wherein the investment opportunities in the IAFP project would be showcased to Dutch agro processors (are part of the WUR investor network) and knowledge partnerships/ technical collaborations with the Indian counterparts would be forged in this visit.

While the common infrastructure would be developed and owned by the anchor investors, the processing and production units would be set up by the Indo-Dutch investors. The RTC ownership would lie with the cooperative societies of IFFCO.

3) What problem or market opportunity did it address?

The IAFPs would facilitate the qualitative and quantitative development of the stakeholders associated with the food processing industry by meeting the following objectives:

- Integration of the supply chain to provide farmer- market linkages that allow efficient flow of produce
- Showcase State's potential and investment opportunities in the Agriculture and Food processing sector
- Demonstrate best management practices (benchmarked nationally and internationally)
- Highlight successful business models operating in India and globally
- Address supply chain and infrastructure- related issues

- Increase the income levels of farmers by linking them with the demand side of the food chain
- Provide a platform for industry interaction and trade facilitation through year-round workshops, seminars and conferences inviting participation from foreign companies and domestic organizations and would aim to
 - ♦ Provide traders/exporters with market intelligence and information.
 - ♦ Train and update processors on international standards for processing methodology.
 - ♦ Enhance customer relationships and provide forward linkages for future business

4) How was the solution developed?

Wageningen University & Research (WUR), Netherlands have been pioneers in developing innovative solutions for meeting the global food demand. The scientists and the experts at WUR are well versed with the designs of Metropolitan Agriculture. Given the situation in India where the demand for food production has been increasing alarmingly while production levels have been stagnating, WUR in association with YES Bank (who have a very good understanding of the agribusiness scenario in India) have come together and conceptualized this innovative concept of Integrated Agrofood Parks (IAFP) suited to the Indian situation. On actualization, the IAFP would not only increase the availability of food to consumers but provide for increased employment to rural populace and attractive investment opportunities to entrepreneurs.

5) What were the implementing stages of the solution?

The work on IAFP started with a feasibility study for several locations suitable for IAFP. A team of experts from WUR and YES Bank have carried out a detailed situational analysis and identified the IAFP location. The master planning stage wherein the setting up of various production and processing systems (that would compliment the regional agricultural strengths of the location) is presently being carried out. The multi-actor network of entrepreneurs, Governmental I also been carried out parallelly and this activity as a whole must continue to attract businesses and develop the services and facilities needed by these companies.

The design of an IAFP is not only of its hardware, i.e. all its physical aspects such as spatial layout, buildings, landscape ecology etc. but the equally or more important aspect of orgware, which is the way it is organised internally and in which it has its outside links, again not only physical but also to the administrative and judicial context in which it is operating. And probably the most complex activity, the software, which include aspects connected to human knowledge, emotions, the way they should be developed and maintained is underway.

6) What challenges had to be overcome?

Implementation of the successful operation of this initiative would necessitate the location of right partners with common vision and motives apart from having appropriate investment appetite. The search of suitable partner began with rounds of discussion with various Public and Private sector organizations. Finding an ideal anchor investor for the project who had the right mix of competencies was a great challenge. The ideal partner on one should have full faith on the futuristic orientation of the IAFP and on the other hand should realize that the IAFP should be geared up for running the entire show. The next major hurdle was posed in terms of identifying the right state (where the IAFP would be located) having conducive regulatory and legal framework for providing support to the development of the IAFP. This would ensure the entry of the private enterprise on a level playing field and will facilitate smooth operation of the project.

The design aspects of the IAFP hinged upon establishment of connection between the network of footloose agricultural production and various processing chains and their surrounding landscape. The challenge was also to integrate the designing exercise with aspects related to water management, infrastructure, landscape and ecological development of the location. Typically, resource management is the critical success factor of the IAFP in the Indian context.

Development of the skill and knowledge set of the farmer/producers/participant associated to each unit of the IAFP to work as consolidated unit will be integral to the success of the IAFP.

7) What are the main outputs / outcomes of the solution?

The main outputs can be quantified in terms of benefit received by various stakeholders.

Benefits to Consumers

- Healthier & Safer food (Reduced allergens & natural toxins)
- Extended freshness & increased shelf life

Benefit to farmers

- Transparency across value chain
- Active exchange of knowledge of product, process etc
- Easy access to latest technology
- Real time transfer of information
- Reduction in wastage and better prices realization

Employment Generation

- At least 10000-12000 direct jobs

- 20000 indirect jobs get created

Benefits to Buyers/ Investors

- Assured supply of raw material/ customized products
- Low cost of production
- Superior logistic and management to reduce overall cost of operation
- Composite range of services under one roof
- Conformation to quality and food safety standards and issues of traceability with respect to European markets
- Better market access

8) What are the lessons learned in implementing the solution? What factors were critical for its success?

The Nellore IAFP has almost completed the planning stage and is just entered the development phase. The WUR-YES Bank consortium has successfully designed and integrated the production, processing, trade related aspects in the context of local and regional economic environment.

9) If there are other solutions to a similar problem what makes this one different?

In India, the Ministry of Agriculture is promoting Modern Terminal Market (MTM) concept for unifying the supply chain for perishable produce. The MTM follows a hub and spoke model for aggregation of the produce and offers upgraded infrastructure for facilitating the handling and storage of perishable produce. The MTM design is also a farmer centric model aiming to increase the farmers share in the consumer's rupee.

While the MTM is focused on one food chain the IAFP has integrated various supply chains in an effective way. The IAFP design envisages integrating different IAFP's as a unitary consolidated grid for an optimal utilization of infrastructure and resources. Different food parks serves for different range of products according to competitive advantage of its location.

The IAFP promotes the concept of circular economy wherein the entire system is self sustaining for its energy requirements. India, like other developing countries is strained on the energy requirement. Therefore, IAFP can be regarded as an initiative to resolve the power deficit especially in the Agro Based industry. The energy dimension sets apart IAFP from the other similar solutions including MTM.

Apart from providing Agri solutions, the IAFP concept also integrates the Agro Tourism component a component which does not figure in other solutions. The

strong focus on system innovation, design and spatial clustering of the IAFP makes it very suitable for promotion of Agri Tourism.

The diverse value added services such as health care, knowledge dissemination, grocery stores etc at the farm level through Rural Transformation Centre's (RTC's) helps to consolidate the village level participant in a cohesive mass. These services set the IAFP apart from the other Agri solutions.

IV. Stakeholders

Which institutions / organizations are supporting the implementation of the solution?

Local / national government agencies

Private sector associations

International organizations

Donors

Banks

**Academia
Spatial**

**Other (please specify) Infrastructure Developers,
Planners, Ecologists**

V. Impact

1) What are the key areas of impact?

Social Productivity **Capacity building/ Training** **Trade**

Employment **Quality** **Safety**

Food security/availability

Other (please specify) Energy Sustainability

2) How is the impact evaluated?

The IAFP project in India is currently underway. Upon completion the project will bring about sustained changes in the way Metropolitan Agriculture is handled today. These changes can be measured against the following:

- Lower veterinary and phytosanitary risks.
- Lowering emissions and waste results in environmental benefits.
- Higher production through improved animal welfare.
- Huge employability prospects in industrial production and processing
- Improves farmers position as preferred supplier
- Enables chain transparency resulting in better quality management
- Sustainable innovation of transformation agriculture into agribusiness

VI. Funding

1) What was/is the budget allocated to design/implement your solution?

A budget of INR 2000 Crores has been estimated for the IAFP at Nellore, Andhra Pradesh.

2) How was the solution financed?

By: Donors Local/national government
 Private sector NGO Other (please specify) Apex farmer
Cooperative

3) Were alternative sources of finance considered?

Yes (please specify) _____
 No

VII. Sustainability and future prospects

1) How can the sustainability of the solution be ensured?

The IAFP meticulously places different Food Chains with the non- agro production systems such as energy production, waste processing and water management to develop an efficient circular economy. The operational success of the entire project depends on the real time execution of the master plan. The business plan developed should be robust and efficiencies brought in through the project in terms of supply chain logistics, energy generation, etc should be perceivably greater than the existing system/solutions. Whereas the strategic ingredient of the project will involve choice of right project partners having a common vision of the Agribusiness scenario and required investment appetite. On a policy level, the intervention from the state/ central agencies can play an important role in the success of IAFP. These agencies play an important role in developing the investor's confidence through appropriate measures to support the industrial development. The faith of the private investors is further strengthened through provision of other support services such as infrastructural and logistic support, direct and indirect taxation for better trade facilitation.

2) Is there a cost recovery scheme in place?

The current model of IAFP undertaken by YES Bank -WUR does not have any funding from state/central government. The IAFP model has entire equity support from a strategic investor and envisages breaking even entirely upon the captive revenues generated through the project. The various revenue sources envisaged are lease rental of commercial space, sale of housing infrastructure, sale of excess power generated, maintenance and user charges.

However, a scheme, floated by Ministry of Food Processing and Industries (MFPI) does have a provision for incentives through subsidies upto 50% of project cost but capped at INR 50 crore. The specification of this scheme is however quite different for the IAFP that is being developed by YES Bank-WUR

3) Are beneficiaries able / willing to pay for services?

The beneficiaries will get entire set of services under one roof. They also envisage greater operational efficiencies in the entire scheme as the waste and the bi-products of their units will be utilized in the IAFP model. Further, assistance provided by the IAFP in trade facilitation will spare them of unnecessary regulatory and statutory clearances which would have come in case of stand alone units. The services provided to the users can be categorized In lieu of these benefits there is a general willingness from the user to utilize such services.

4) What are the future plans for the implementing institution?

There is a plan to develop IAFP's across India. This will be undertaken in a phased manner consisting of two phases. During the first phase a total of 8 IAFP's will be developed in the states of Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra and Gujarat. In phase II the IAFP's will be developed in another 7 states of North India to create a unified grid of IAFP's across India. With the backing of the international expertise of WUR, the consortium is also open to similar initiative in other countries.

5) How will the implementing institution continue to provide services to beneficiaries?

Greenport, an operational holding of WUR, undertakes all activities pertaining to development and implementation of IAFP's across the globe. Greenport has already tied up with a private strategic investor to form an SPV that will be the operational holding for governing the IAFP. This SPV will own the IAFP and will have the following responsibilities:

- ✓ Develop, manage and operate the common infrastructure for the IAFP
- ✓ Scout for private players and lease out land to them for establishing processing facilities
- ✓ Provide essential services such as power, water, logistic facilities, maintenance of infrastructure and other specific services to the individual processing unit.

- ✓ Facilitate trade through services such as logistics, climate controlled storage, packaging, export documentation, food safety, food quality certification

These services will be provided to the users against specific service charges.

6) Are there expansion plans for new services – new potential beneficiaries?

The proposed IAFP at Nellore will benefit the people related to the following Agri enterprises:

- ✓ Farmers (F&V and Grains)
- ✓ Small dairy operators
- ✓ Poultry Units
- ✓ Piggery Units
- ✓ Green house Vegetable production
- ✓ Milk Processing plant
- ✓ Meat Processing Units
- ✓ Aquaculture units

New enterprises such as floriculture units/ other units can be incorporated on merit basis.

VIII. Opportunity for replicating or scaling up the solution

1) Can the solution be replicated/scaled up to cover other areas/regions/countries/groups/products?

Each IAFP will have RTC's located within 50-100 Kms of the IAFP (sometimes less than that) taking into consideration logistic viability of each IAFP. Each RTC has been marked after a through calculation of the supply side factors available in the catchment area. Simultaneously, sufficient due diligence has been done for the demand side factors to arrive at the production capacities of the different processing units. However, with a surge in demand of particular food chain, reserve area can be utilized within the IAFP to expand in-house production/processing capacity of the existing food chains. Further geographical coverage will be done by way of creation of new IAFP's at high potential regions in an effort to create a unified grid across India. Each IAFP will consist of different plant and animal based products depending on the supply strength of the catchment area.

The IAFP model is a self sustaining model which can be replicated in other developing countries.

2) In which way can this be achieved and what resources would be needed in order to replicate/scale up the solution?

The Agribusiness scenario of India is highly diverse with different agro climatic zones existing across the country. A consolidated approach is required to scale up the operation to other geographies. This can be achieved through integration of different IAFP's across the country.

3) What should be considered in the implementation?

For the existing situation in India the replication will be required at specific locations considering factors like supply strength, locational advantage, connectivity to

4) Is a business plan or project document available?

Business plan Project document

Please upload it if it is available and ready to be shared.

(Upload Button)

IX. South-South Cooperation

1) Does the solution model offer opportunities for South-South cooperation?

Yes No

2) Is there cooperation already ongoing with initiatives or projects in other places?

Yes No

3) What are the tools and elements needed for South-South cooperation?

The population of Africa has grown exponentially over the past century, it has doubled over the past 28 years, and has quadrupled over the past 55 years and is expected to reach one billion before 2010. The African sub-continent is currently supporting a population of an estimated 922 million (as of 2005) and is characterized with rapidly developing urban centre's. These urban centre's constitutes a different consumer base with preference for clean and healthy food and is growing at 5% annually. The changing consumer preference in the expanding urban centre's is putting additional pressure on the food supply system.

Further, Agricultural scenario in Africa is marked with low land productivity (almost 50% of that of the Asian and Latin American countries), low labor productivity (about 60% of that of Asian and Latin American countries) and the yields of crops is far lower than the world averages. This combined with constant climate change is resulting in falling precipitation, desertification and increased climate variability. As a result of the above factors there is increased land stress and unsustainable development.

Insufficient investment, weak local private sector and infrastructure, weak linkage between farmers and processors/ markets, high wastages across the supply chain mark the Agro processing sector of developing African economies leading to low competitiveness, growth in food imports, and falling share of agricultural exports in world markets.

The situation requires an integrated approach to sustainable agriculture interlinked between industrial, economic and environmental factors.

In this context, the IAFP can prove to be a very innovative answer to issues related to existing food situation of the developing countries of Africa. Abundance of natural resources and varied climatic and agro-ecological zones which enables the year-around production of wide range of diverse crop and strategic locational advantage makes the African continent an attractive option for overseas expansion of Indian operations. Also, African countries have the potential to develop as a preferred production and distribution hub for interested investors planning to target European and Middle East Markets.

The benefits accrued through the IAFP can play an important role in improving the socio-economic condition at the grass root level apart from aiding the industrial development of these countries.

Appropriate trade promotion and investment policy are required for strengthening the relationship between African Countries and India. This trade promotion policy should be targeted towards providing a favorable trade environment by looking into the factors such as ease of setting up of industrial establishment, general business service support such as roads, rail connectivity, logistic availability, availability of consolidated land resources etc. Further, an appropriate investment policy should be able to insulate the investor from political and economic aberrations. More importantly, the role of the central government will assume importance in identifying small and medium entrepreneurs to ensure a fuller participation from the private sector.

4) How could South-South cooperation be implemented?

The first step towards promotion of south-south cooperation in relation to IAFP can be establishment of bilateral ties between interested countries

Such south-south cooperation between India and African countries can be initiated through bilateral trade tie-ups in the field of Agriculture and

Agribusiness between governments of India and interested African economies. These tie-ups would assist in opening up of these economies to the interested investors. The central governments will constitute the key driving force for promotion of the IAFP concept. The following steps, although not comprehensive, will broadly constitute the further course of action for forging such tie-ups:

1. Introduction of favorable Agro-Industry policy within the country for facilitating mega investments for the IAFP projects
2. Preparation of investment profile for each country highlighting key Agricultural strengths
3. Conducting a feasibility study for identification of suitable locations for development of IAFP's
4. Conducting road shows for key investors by the host countries
5. Involvement of state agencies for arranging land and human resources
6. Organizing local Small and Medium Enterprises for participating in the IAFP's

Comments

Documentation -- to be uploaded here

- 1) **Reports, brochures, newspaper clippings etc. (PDF format preferred)**
- 2) **Videos, YouTube presentations etc.**