

Executive Summary

The Project

After considering agro-climatic and socio-economic features of Assam, a comprehensive agricultural project titled “Assam Rural Infrastructure and Agricultural Services Project (ARIASP)” was conceptualized in the year 1994. The Government of Assam approached the World Bank through the Government of India for financial support for this project. The project was sanctioned and being implemented since 31st August 1995. Closing date of this project is 30th June, 2004.

Project Objectives

“The project aimed to benefit the poorest section of the rural population in the state of Assam by offering better income enhancement opportunity to poor farmers, and particularly to women and to improve their nutritional status”. The project contained specific mechanisms for targeting these groups. To achieve these objectives, project has extended support mainly in three areas i.e., poverty alleviation activities, institutional development and infrastructure development efforts of the Government of Assam.

Project Area

Although the project covered poor farming communities in the entire state (23 districts), the intensity of activities in each district varied on the basis of the existing production potential. It has provided specific investment support to meet the high priority needs of these communities.

Following is a brief sketch of various activities undertaken in various sectors under ARIASP:

<i>Poverty Alleviation</i>	<i>Institutional Development</i>
Horticulture Development	Technology Generation
• Rehabilitation of Progeny orchard	• Strengthening the RARS under AAU
• Demonstrations	• Strengthening the LRS
• Training	• Strengthening HRS
Fisheries Development	• Establish & new FRC
• Development of Farmers pond	Education and Training
• Development of Community tank	• Monthly cluster training
• Demonstration	• Farm women training
• Open Water Fisheries/ Beel	• Workshops.
Livestock Development	Extension
• Frozen semen distribution	• Construction of SDAOs office
• Artificial Insemination	• Demonstration.
• Fodder Minikit Demonstration	Seed Multiplication
• Training / Mass meetings	• Semi Conditioned Godowns
Infrastructure Development	
Irrigation	
• STW	
• DTW / RPS	
• Training.	
Rural Roads	
• Conversion of bridges	
• Roads Rehabilitation	
• Road equipment (LS)	
• Training	

Impact of the project

Under ARIAS Project, developmental intervention has been made in agriculture, livestock and fisheries sectors in order to improve productivity of these sectors. This approach was based on the assumption that increased productivity of agriculture, livestock and fisheries sectors together will improve income level of poor farmers. Findings of impact study indicate that due to STW intervention in the project, farmers have started shifting from food grains to cash crops. It has also pushed cropping intensity up to 213%. Though assured irrigation created through STW have helped in improving productivity of all major crops but the highest increase in crop productivity was observed in case of paddy (163%). Study also revealed that as a result of STW induced increase in cropping intensity and crop productivity, agricultural income of farmers has increased by more than 34%.

Irrigation development efforts through rehabilitation of DTW and RPS have seen only partial success. From rehabilitated schemes typically 8 to 34 beneficiaries in case of DTWs and 10-15 beneficiaries in case of RPS are being served.

Fisheries development efforts of the project has helped in improving fish productivity at farmers and community pond level. Fishery development has also improved per capita fish consumption of fish beneficiaries. Livestock developmental activities in the project on the other hand has changed composition of herd in favour of more productive cross bred animals. Project effort also has positive impact on milk productivity, lactation period and per capita milk intake for beneficiary farmer. Improved productivity of livestock herd has resulted in 109% increase in income from dairying for livestock beneficiary farmer. Study indicate that introduction of tractor under mechanization component of project also have positive impact on agriculture.

Impact study findings also reveal that by undertaking institutional development through strengthening of RARS, LRS, HRC, FRC and FWTC, etc. research and technology dissemination institutions technology generation and research delivery capacity of these institutions has gone up significantly.

Impact assessment study indicates that road rehabilitation and timber bridge conversion activities have helped in increasing year round accessibility of villages, improved market access, increased fuel use efficiency (17-50%) and brought down transportation and travel cost. Road rehabilitation has also increased accessibility of health, education and market facilities located outside the village.

Summary of ARIASP Project in Log framework format

Following tables provides the summary of ARIASP Project in log framework format.

I - POVERTY ALLAVIATION ACTIVITIES

A- Summary of Impact of Fishery Development Activities					
SAR Target			Achievement		
Input (Interventions)	Output	Outcome	Input (Interventions)	Output	Outcome
1) Establishment of fish health units	1) Easy access to fish health services to fish farmer	1) Production of diseases free fish	1) (a) Established two wet laboratories (b) Two sets of scientific equipment were procured	1) Access to fish health service has increased	1) Production of disease free fish 2) Quality of fish feed has improved
2) Establishment of mini-mill	2) Increased availability of quality fish feeds.	2) Improvement in quality of feeds.	3) (a) 4249 farmers pond were developed (601.83 ha) (b) 730 community tank were developed (822.37 ha area)	2) Availability of quality fish feed has increased 3) Opportunity for fish production increased	3) (a) Fish productivity has increased significantly (b) Total fish production has increased
3) Development of farm Pond/ community pond	3) Increased opportunity for fish production	3) (a) Increase in fish production. (b) Increase in income from fisheries	4) (a) Civil works have been carried out at six training centers. (b) Two training centers were renovated (c) 21 vehicles & 6 mini buses were procured (d) Procurement of 3 mobile fish health clinic vans	4) Improvement in quality of extension service.	(c) Increase in income from fishery. 4) Adoption of innovations in fish production by fish farmers.
4) Strengthening of fisheries extension service	4) Better extension services to fish farmers.	4) Adoption of innovations in production by fish farmers			

B- Summary of Impact of Livestock Development Activities

SAR Target			Achievement		
Input (intervention)	Output	Outcome	Input (intervention)	Output	Outcome
1) Establishment/ rehabilitation of Frozen semen Bank/ Liquid Nitrogen Plant Strengthening of Diseases Diagnostic Laboratories Training	1) Increased availability of frozen semen. 2) Decrease in incidence of diseases. 3) Change in knowledge, skill and attitude of professionals and livestock owners. 4) Better service to livestock owners.	1) Increased AI activity. 2) Breed improvement. 3) Increase in milk production Healthy animals. 4) Adoption of better breeding, feeding , management and health care practices by the livestock owners.	1) 228039 dozes of frozen semen produced 2) 415 AI centers Rehabilitated 3) 495619 AI conducted 4) 858722 fodder slips distributed 5) Civil construction work completed 6) Organised training to 411 Departmental Staff. 7) Training to 5955 farmers 9) 20216 Mass meetings were held	1) Availability of frozen semen has improved 2) Significant decrease in incidence of disease 3) Significant changes have been observed in knowledge, skill and attitude of professionals and livestock owners 4) Quality of service to livestock owners have improved	1) 428527 AI performed 301 % increase in milk productivity. 3) Health of livestock improved 4) Proportion of cross bred animals in total herd has increased from 5:1% to 3:1.

C- Summary of Impact of Horticulture Development activities

SAR Target			Achievement		
Input (Intervention)	Output	Outcome	Input (Intervention)	Output	Outcome
Strengthening of Progeny Orchards. Training/ Demonstration	1) Increase in availability of quality planting materials.	1) Increase in area under horticultural crops.	1) 23 progeny orchards have been rehabilitated	1) Adoption rate is slow but expected to pick up.	1) Productivity of vegetable crops improved.
	2) Change in knowledge, skill and attitude of professionals and farmers.	2) Increase in production of horticultural crops.	2) Restoration work is expected to be complete in another orchard.	2) Availability of quality sapling has increased.	2) Average productivity of horticulture crops has increased on the range of 5% to 70%
	3) Better services to farmers	3) Adoption of innovations in horticulture	3) 20450 training programs have been organized.	3) Knowledge, skill and attitude of professionals have improved.	
			4) 7247 demonstrations have been conducted.	4) Quality of service to farmers has improved.	

II - SUMMARY OF IMPACT OF INSTITUTIONAL DEVELOPMENT

Summary of Impact of Institutional Development activities					
SAR Target			Achievement		
Input (intervention)	Output	Outcome	Input (intervention)	Output	Outcome
1) Strengthening /establishment of Regional Agricultural Research Stations/Livestock Research Center/Horticulture Research Center/Fisheries Research Center. 2) Establishment of Pilot Project on Soil and Water Conservation and Management.	1) Capacity of research institution to generate demand-driven, location-specific and problem-solving appropriate technologies. 2) Treatment of 5400 hectares land. 3) Increase in knowledge skill and attitude of farmers regarding soil and water conservation and management.	1) Increased availability of required technologies. 2) Increase in production and productivity.	1) Civil works at 6 RARS, LRC, HRC and FRC has been completed. 2) Research has been initiated. 3) Gagalmari Land Management Project has been implemented.	1) Capacity of research institution to generate demand-driven location specific problem solving appropriate technologies has improved. 2) Cropping intensity has gone up to 213%. 3) Improvement in the knowledge and skill of the farmers	1) Availability of required technologies have improved. 2) Productivity of all major crops has increased 3) State has become self sufficient in rice production.

III - SUMMARY OF IMPACT OF INFRASTRUCTURE DEVELOPMENT ACTIVITIES

A- Summary of Impact of Irrigation Development					
SAR Target			Achievement		
Input (intervention)	Output	Outcome	Input (intervention)	Output	Outcome
1) Construction / rehabilitation of shallow tube wells/ river pumping schemes. 2) Establishment and training of farmers groups.	1) Increased irrigation facilities. 2) Better maintenance and utilization of irrigation infrastructure created.	1) Increase in cropping intensity. 2) Increased production 3) Generation of additional rural employment 4) Increase in farm income. 5) Judicious use of irrigation water.	1) 70450 STW installed. 2) 136 DTW installed. 3) 56 RPS installed. 4) 23 CMLI 4) 228 training programs have done.	1) Irrigation facilities improved. 2) Significant improvement in maintenance and utilization of irrigation infrastructure created.	1) Cropping intensity has shifted in more intensive range. 2) Crop productivity has increased upto 213 %. 3) Employment & income have increased (34%). 5) Improved efficiency and sensitivity in water use efficiently.

B- Summary of Impact of Rural road Rehabilitation

SAR Target			Achievement		
Input (intervention)	Output	Outcome	Input (intervention)	Output	Outcome
1) Rehabilitation of rural roads and replacement of unserviceable timber bridge.	1) Improvement in rural road conditions.	1) Increased transportation cost effectiveness	1) 716.4 km. rural road have been rehabilitated	1) Easy access to local market and better income generated in rural area.	1) Transportation cost effectiveness has improved 17-58 % fuel saving
2) Support for rural road maintenance	2) Improvement in maintenance of rural road and bridges.	2) Adoption of a Maintenance Action Plan for rural roads.	2) 209 piled bridges and 56 non piled bridges have been converted into RCC bridges.	2) Better disposal of surplus agricultural produce.	2) Saving in travel time
3) Training of concerned personnel	3) Improvement in Knowledge of project selection, management and monitoring.	3) Skill upgradation	3) 'Maintenance Action Plan' for rural roads is under process.	3) Rural road Maintenance policy has been approved by GOA	3) Accessibility of health services, educational facilities to rural people has improved.
					4) Better Maintenance of rural roads.