



Draft Design and Monitoring Framework

---

Project Number: 40054-01-3  
November 2007

**BAN, BHU, IND, NEP:  
Subregional Economic Cooperation Information  
Highway Project**

Asian Development Bank

## DESIGN AND MONITORING FRAMEWORK

<b>Design Summary</b>	<b>Performance Targets/Indicators</b>	<b>Data Sources/Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
<p><b>Impact</b></p> <p>Enhanced regional flow, sharing, and integration of information, contents, services, knowledge, and ideas of the SASEC subregion</p>	<p>Improved the livelihood and well-being of rural communities in the selected pilot districts of all SASEC countries by 20% within 5 years after project completion</p> <p>Reduction in the cost and increase in the quality of data communication between all SASEC countries by 10% per annum for 5 years after project completion</p> <p>Increase in the ICT composite index of e-readiness of all SASEC countries by 10% within 5 years after project completion</p> <p>Increase in the ICT-enabled regional activities, such as regional e-trade, e-tourism and e- training, by 10% within 5 years after project completion</p>	<p>Compilation of Government statistics</p> <p>Baseline study and impact monitoring report</p> <p>ADB project completion report</p> <p>ADB evaluation Missions</p> <p>Digital Opportunity Index published by International Telecommunication Union (ITU) and other ICT index published by United Nations organizations</p>	<p><b>Assumptions</b></p> <p>Favorable political supports and economic activities on a regional level among the SASEC countries</p>
<p><b>Outcome</b></p> <p>ICT made more accessible, affordable, inclusive, sustainable, and useful to remote and rural communities, entrepreneurs, and research and training institutes of all SASEC</p>	<p>Exchange of social capital<sup>1</sup> between SASEC country villages through SASEC Regional Network and Village Network within 3 years after project completion</p> <p>Increase in regional and country websites, e-business and applications by 10% within 3 years after project completion</p> <p>Establishment of the SASEC education</p>	<p>ITU teledensity statistics</p> <p>Financial reports of service agencies</p> <p>ADB project completion report</p> <p>Project household, business, universities, and</p>	<p><b>Assumptions</b></p> <p>Proper implementation and enforcement of multilateral and bilateral agreements among the SASEC countries and in-country agreements</p> <p>Competitive,</p>

<sup>1</sup> Social capital is a concept that refers to the knowledge, norms and networks that collectively define local communities, and recognizes that local networking and local information sourced from within rural communities are potentially powerful drivers for ICT utilization in the rural context.

<b>Design Summary</b>	<b>Performance Targets/Indicators</b>	<b>Data Sources/Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
countries	<p>and research collaborative network linking universities and rural communities in SASEC countries within 3 years after project completion</p> <p>Increase in teledensity (both in terms of individual household and shared facility-telecenters) and reduction of communication cost in remote and rural areas by 10% within 2 years after project completion</p> <p>Financially and technically sustainable operation of SASEC Regional Network, Village Network, Research and Training Network o by service agencies, universities, and private operators within 2 years after project completion</p>	government survey report	<p>nondiscriminatory, and transparent operation of regional network by the SASEC service agencies for access for Internet service providers (ISPs) and other carriers within and outside the region</p> <p>Peering arrangements made among the ISPs of SASEC countries</p> <p>Risk Communities' resistance and unfamiliarity with new technologies</p>
<p><b>Outputs</b> SASEC Regional Network</p>	<p>Fiber optic network, existing or to be newly built, connecting the SASEC countries: (i) a new cable installation of approximately 55 km from Panchagarh to Banglabandha in Bangladesh; (ii) an alternative fiber optic route from Thimpu to Phuentsholing of 140 km in Bhutan; and (iii) an alternative fiber optic route from Hetauda to Biratnagar of 433 km in Nepal</p> <p>4 access gateways established at (i) Thimpu in Bhutan, (ii) Dhaka in Bangladesh, (iii) Shiliguri in India, and (iv) Kathmandu in Nepal</p> <p>9 border townships established at (i) Panchagahr and Banglabandha in Bangladesh; (ii) Phuentsholing in Bhutan; (iii) Shiliguri, Jogbani, Fulbari, and Jaigaon in India; and (iv) Biratnagar in Nepal.</p>	<p>Bid evaluation and award of contract reports</p> <p>Project monitoring and progress reports</p> <p>Consultant reports</p> <p>ADB review missions</p> <p>Government policy, legal and regulation statements</p>	<p><b>Assumption</b> Liberalization of Voice over internet protocol (VOIP)</p> <p>Existence of strong rural entrepreneurs who take up community-e centers, rural network, and e-business</p> <p>Strong coordination and collaboration among service agencies of all SASEC countries</p>



Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
	<p>established to encourage rural entrepreneur investments for ICT enabled business development.</p> <p>On-line and off-line research and training programs on e-business development as well as IT professional development provided through RTCs and CeCs</p> <p>Awareness building and training to be provided to the communities and governments affected by the project during the project implementation.</p>		
<p><b>Activities with Milestones</b></p> <p>Component 1: SASEC Regional Network</p> <p>1.1. Sign multilateral regional cooperative network agreement before the start of month 1</p> <p>1.2. Select four (4) service agencies each from all SASEC countries by end of month 3</p> <p>1.3. Sign six (6) bilateral network agreement by service agencies of 2 countries by the end of month 6</p> <p>1.4. Develop the detailed network design by the end of month 6</p> <p>1.5. Prepare bid documents by the end of month 6</p> <p>1.6. Complete tendering and selection of contractors by the end of month 12</p> <p>1.7. Install, test, and operate the network by the end of month 21</p> <p>1.8. Sign four (4) in-country agreement for network transfer and operation each by the executing agency and the service agency in each country by the end of month 21</p> <p>1.9. Complete peering agreements by the end of month 21</p> <p>Component 2: SASEC Village Network</p> <p>2.1. Select rural internet service providers (ISPs) each from all SASEC countries by end of month 3</p> <p>2.2. Develop the detailed network design by the end of month 6</p> <p>2.3. Prepare bid documents by the end of month 6</p> <p>2.4. Complete tendering and selection of contractors by the end of month 12</p> <p>2.5. Install, test, and operate the network and community e-centers by the end of month 21</p> <p>2.6. Sing in-country agreement for ownership transfer and operation by the executing agency and selected CeC operators in each country by the end of month 21</p> <p>Component 3: SASEC Research and Training Network</p> <p>3.1. Select four (4) universities each from all SASEC countries as a country host for research and training center (RTC) by end of month 3</p>			<p><b>Inputs</b></p> <p>ADB's grant of \$4.7 million and \$9.0 million for Bhutan and Nepal respectively;</p> <p>ADB's loan of \$3.1 million for Bangladesh;</p> <p>ADB's TA grant of \$4.4 million under ADB's Regional Cooperation and Integration Fund (RCIF); SASEC Governments financing of \$7.2 million</p>

<b>Design Summary</b>	<b>Performance Targets/Indicators</b>	<b>Data Sources/Reporting Mechanisms</b>	<b>Assumptions and Risks</b>

3.2. Develop the detailed design for RTCs and their connectivity to SASEC Regional Network by the end of month 6  
3.3. Prepare bid documents by the end of month 6  
3.4. Complete tendering and selection of contractors by the end of month 12  
3.5. Install, test, and operate RTCs and their networks by the end of month 21

ADB = Asian Development Bank, CeC = Community e-Center, ICT = information and communications technology, RTC = research and training center, TA = technical assistance.