



# **Discussion Paper: CAREC Institute Prospectus**

**Senior Officials' Meeting on  
Central Asia Regional Economic Cooperation  
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## ABBREVIATIONS

ADB	–	Asian Development Bank
AVIST	–	ASEAN Virtual Institute of Science and Technology
CAREC	–	Central Asia Regional Economic Cooperation
CAG	–	Central Asian Gateway
EPIN	–	Economic Policy Institutes Network
EVISA	–	European Virtual Institute for Speciation Analysis
HRD	–	human resource development
IT	–	information technology
IMF	–	International Monetary Fund
MOU	–	memorandum of understanding
MI	–	multilateral institution
SOM	–	Senior Officials' Meeting
TOR	–	terms of reference
UNECE	–	United Nations Economic Commission for Europe
UNDP	–	United Nations Development Programme
VIMSS	–	Virtual Institute for Microbial Stress and Survival
WTO	–	World Trade Organization

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## EXECUTIVE SUMMARY

Ministers representing the eight countries participating in the Central Asia Regional Economic Cooperation (CAREC) Program agreed at the 5th Ministerial Conference in October 2006 on the desirability of establishing a CAREC Institute to coordinate and expand the Program's research, training, and dialogue activities. The CAREC Institute is envisaged to become a region-based institution covering CAREC's specific needs for research, training, and knowledge solutions to common problems and more effective regional cooperation. The mission of the CAREC Institute is to enhance the quality of regional cooperation by generating world-class knowledge resources in the priority areas of transportation, trade, and energy, which will lead to greater capacities for regional cooperation and accelerated economic growth in Central Asia.

The main purposes of the CAREC Institute are (i) to enhance the capabilities of CAREC government officials to engage in regional cooperation processes and improve their capacities to plan and implement regional cooperation projects; and (ii) to apply new solutions and best practices based on empirical research to regional challenges and cooperative processes, and to build up policy analysis capabilities in the region. The CAREC Institute's main outputs will be a capacity building training program for CAREC officials, an applied research program aiming to overcome obstacles to regional cooperation and enhance efficiency and impact of regional projects, and outreach to extend the impact of training and research outputs and facilitate dialogue processes.

The CAREC Institute will coordinate the CAREC Program's overall capacity building strategy by preparing and updating a human resource development (HRD) agenda for selected CAREC government officials initially, and eventually more broadly for private sector and other participants of regional cooperation processes. Selected modules and courses will be developed and delivered by the CAREC Institute's network partners, while other training needs will be coordinated with donor agencies.

The research initiatives of the CAREC Institute will have practical applications to the CAREC Program and the participating countries. The CAREC Institute will develop a research network to carry out its research program. Prospective members of this network include universities, think tanks, research/policy institutes, and other entities in the CAREC countries and beyond.

In its first years, the CAREC Institute will rely heavily upon partnerships for the development and delivery of training courses and research activities. The CAREC Institute's network for training and research activities will consist of regional and external training institutions, think tanks, multilateral institutions, and renowned experts in particular fields.

The CAREC Institute will conduct various outreach activities intended to extend its training and research impact more broadly and to foster a broader understanding of the benefits of regional cooperation and the costs of non-cooperation. A CAREC web portal will be developed and present information about the CAREC Program, the CAREC Institute and its training and research programs, and other pertinent information. The CAREC Institute will also organize seminars and workshops on selected priority topics and invite leading experts from the region and around the world to lead interactive sessions for CAREC policymakers and business representatives. Workshops and seminars, including a "Distinguished Speakers Series," will be designed to promote dialogue among experts, policymakers, and other stakeholders and

encourage the application of cutting edge knowledge and best practices to the CAREC Program and within the participating governments.

In its initial stage, the CAREC Institute will take the form of a virtual institute. This offers substantial advantages by making use of existing resources and minimizing fixed investment costs before tangible benefits of the Institute are demonstrated. By having a virtual arrangement, the CAREC Institute will be sufficiently performance-based in its initial operations to ensure adequate outcomes and benefits to participating countries. Initially, the CAREC Institute will be closely linked with the CAREC Secretariat, supported by the Asian Development Bank (ADB), for technical and administrative reasons, namely to draw on the immediate human resources and technical infrastructure that the secretariat can provide, and to facilitate the coordination of CAREC priority agendas into the Institute's planning and activities.

This prospectus includes a proposed work plan for 2008-2010 with an indicative schedule of training courses and modules for government officials, research topics, and outreach activities. The annual operating budget is planned to be scaled up each year during the first three years to correspond to the phasing in and scaling up of activities. The initial three-year operating costs for the Institute are estimated at approximately \$3.85million.

Following an initial period of operations of three years, an assessment of the Institute will be conducted to determine an appropriate approach to the next phase of development. The assessment will consider the Institute's accomplishments, the relevant needs of the CAREC Program at the time, the capacities of other institutions and networks in the region, the availability of financing, and other considerations.

## I. INTRODUCTION

1. The Central Asia Regional Economic Cooperation (CAREC) Program<sup>1</sup> has brought Central Asian and neighboring countries together in the pursuit of regional economic cooperation since 2001. Despite many notable achievements in infrastructure, energy, and trade facilitation, deeper coordination and harmonization among participating countries will be necessary to realize the full potential of regional cooperation. Achieving greater levels of coordination and harmonization, increasing the region's international competitiveness, and overcoming barriers to cooperation in the Program's priority areas of transport, energy, and trade will depend greatly on the generation of knowledge and its application to specific issues and impediments.

2. To this end, the CAREC Program has made an explicit objective of intensifying its knowledge and training activities to support the strategic directions, ownership, and mainstreaming of regional cooperation into participating countries' development plans and CAREC programming. The knowledge/capacity building pillar of the *CAREC Comprehensive Action Plan*<sup>2</sup> (CAP) aims to harness the region's research strengths and combine them with a training program for government officials to increase capacities for designing and implementing mutually beneficial regional initiatives.

3. In recognition of the need for greater knowledge resources pertaining to regional cooperation, the 5th Ministerial Conference on CAREC endorsed the formation of a CAREC Institute to coordinate research, training, and dialogue activities<sup>3</sup>.

4. Knowledge can be considered a public good, and achieving breakthroughs in knowledge often requires a concentration of efforts and building-up of centers of excellence.<sup>4</sup> However, individual developing countries typically lack the critical mass of knowledge resources and expertise necessary to make knowledge breakthroughs and satisfy demand for high-level knowledge applications. Networks can effectively pool limited resources and expertise in a region to achieve knowledge breakthroughs and meet this demand. The CAREC Institute will help facilitate this effort by developing an effective research network to address common challenges faced by CAREC countries and support more effective regional cooperation.

5. Increased and improved participation in regional cooperation processes requires expanded knowledge, skills, and exchanges of information, including information on best practices. The CAREC Institute's training initiatives will increase the amount and quality of participation of stakeholders in CAREC processes.

## II. MISSION STATEMENT, PURPOSES, AND BENEFITS

6. The mission of the CAREC Institute is to enhance the quality of regional cooperation by generating world-class knowledge resources in the priority areas of transportation, trade, and energy, which will lead to higher capacities for regional cooperation and accelerated economic growth in Central Asia.

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<sup>1</sup> Eight countries participate in the CAREC Program: Afghanistan, Azerbaijan, People's Republic of China (PRC), Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan. They are joined by six multilateral institutions: ADB, European Bank for Reconstruction and Development, International Monetary Fund, Islamic Development Bank, United Nations Development Programme, and World Bank.

<sup>2</sup> 2006. *CAREC Comprehensive Action Plan*. Manila.

<sup>3</sup> Fifth Ministerial Conference on CAREC. 2006. *Urumqi Declaration*. Urumqi, PRC.

<sup>4</sup> Todd Sandler, "Regional Public Goods and Regional Cooperation," January 2005.

7. In order to accomplish this mission, the CAREC Institute has two main purposes:
  - (i) to enhance the capabilities of CAREC government officials to engage in regional cooperation processes, and improve their capacities to plan and implement regional cooperation projects; and
  - (ii) to apply new solutions and best practices based on empirical research to regional challenges and cooperative processes, and build up policy analysis capabilities in the region.
8. These two purposes will be accomplished through the CAREC Institute's main outputs, including:
  - (i) a capacity building training program, to strengthen the knowledge and skills of government officials and other stakeholders in priority areas related to regional cooperation;
  - (ii) an applied research program, to generate new knowledge, innovation, and applied solutions that will facilitate more meaningful and effective regional cooperation for the region's long-term development; and
  - (iii) an outreach program, to extend the impact of the Institute's training and research more broadly and to foster a broader understanding of the benefits of regional cooperation and the costs of non-cooperation. (Section III provides further details on outputs and activities.)
9. The CAREC Institute will increase the knowledge and skills of CAREC government officials and other stakeholders, enabling them to engage more effectively in regional cooperation. It will also develop and deliver through a network of human resource development (HRD) institutions training modules and full courses to provide sustainable regional solutions to capacity building needs for regional cooperation. This process will enhance the quality of HRD institutions in CAREC countries through their participation in the network and the development of local centers of excellence. The Institute will generate relevant research in the priority areas of CAREC and develop dialogue channels between experts in the network and government officials, senior policymakers, and other stakeholders to facilitate the flow of research findings and solutions to regional cooperation challenges. Additionally, the Institute's research will increase the application of international best practices to regional projects and processes.
10. Achievement of these objectives is expected to lead to several benefits. The capacity building initiatives will strengthen participants' knowledge foundations and skills for regional cooperation activities. The enhanced knowledge and skills will in turn lead to more rapid identification and development of priority regional projects, a greater number of regional proposals and activities initiated by the CAREC countries, and more effective development policies.
11. Through its research program, the Institute will develop and make widely available updated expert information and resources that other researchers, government officials, and policymakers can use in planning and implementing regional activities. Shared knowledge from joint research, training, and dialogue channels should result in a greater convergence of participating countries' economic development policies in areas covered by regional cooperation. Moreover, the regional policies and projects emanating from CAREC countries will be based to a greater degree on international best practices. This should result in improved undertakings, attract greater private sector involvement, and enhance countries' engagement

with multilateral institutions and other CAREC partners. The Institute's activities should also contribute to the emergence or strengthening of “policy communities” of researchers, academic institutions, policymakers, and other stakeholders, to facilitate dialogue and enhance the impact of applied research and policy studies in CAREC’s priority areas.

### III. KEY ACTIVITIES

#### A. Capacity Building

12. The capacity building objective of the CAREC Institute is to strengthen the knowledge and skills of government officials and other stakeholders in priority areas related to regional cooperation.

##### 1. Preparing and coordinating an HRD agenda

13. The Institute will coordinate the CAREC Program's overall capacity building strategy by preparing and updating an HRD agenda for selected government officials initially, and eventually more broadly for private sector and other participants in regional cooperation processes. In preparing and updating the training agenda, the Institute will undertake periodic training needs assessments, such as the one recently completed under ADB Regional Technical Assistance (RETA) 6375.<sup>5</sup> CAREC sector strategies will also help define training needs and serve as additional inputs to the overall HRD agenda. Specific training plans will be prepared based on these and other inputs to cover the overall set of training activities.

14. Selected modules and courses will then be developed and delivered by the Institute's network partners. The Institute will coordinate with partner institutions and other training providers to avoid duplication of efforts and promote relevant training opportunities offered in addition to those contracted or organized by the CAREC Institute. It is hoped that the Institute can become not only a developer of specifically contracted courses, but also a hub for consolidating and disseminating information on other relevant training opportunities available in the region.

##### 2. Developing and delivering training modules and courses

15. The Institute will develop selected training modules and full training courses through its network of partner institutions and eventually its own HRD experts. Modules will be designed for short (½ - 1 day) training sessions to be offered repeatedly to officials and other stakeholders new to the CAREC Program and regional cooperation in general. Full training courses of varying lengths will also be developed and delivered for the CAREC Institute. Selected courses will be specially designed to meet the needs of CAREC country stakeholders, while other courses will be of a more generic, “off-the-shelf” variety already offered by a training institution. The Institute will be permitted to make arrangements with other HRD institutions for utilizing their existing courses. This will enable the Institute to take advantage of comparative expertise around the world, particularly in the initial phase.

16. Additionally, there is a wealth of training materials already at hand from programs run by the multilateral institutions involved with CAREC. The Institute will compile, with the assistance of the multilateral institutions, relevant existing training modules and re-package the materials

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<sup>5</sup> ADB. 2006. RETA 6375: *Central Asia Regional Economic Cooperation: Capacity Development for Regional Cooperation in CAREC Participating Countries, Phase I*. Manila.

as necessary (e.g., translation) to suit the needs of CAREC. These materials may then be used by network training partners and posted on the Institute portal to widen dissemination.

### **3. Institutional capacity building**

17. Through its network of partners, the CAREC Institute will also support Institutional capacity building. This will take two tracks: (i) a twinning approach to the development and delivery of training courses; and (ii) a proposed endeavor to establish centers of excellence in the region at a later date.

18. The development of courses for the Institute will involve a process of twinning an advanced HRD institution (often outside the CAREC region) with a “beneficiary” institution based in the CAREC region to foster institutional capacity building. Such an approach is used successfully by the UNCTAD Virtual Institute and is also seen in the Economic Policy Institutes Network (EPIN). The twinning process will transfer knowledge and skills from the advanced institution to the beneficiary institution during course development and delivery. This will build the capacity of the beneficiary institution to deliver similar courses on its own in future. This approach will play a vital part in the sustainability of the CAREC Institute and the CAREC Program as a whole.

19. The second, longer-term, track is intended to complement the first track by intensifying efforts to establish selected centers of excellence around the CAREC region. Centers of excellence can play a critical role in assisting countries in achieving national capacities to take advantage of knowledge created elsewhere, and to enable knowledge breakthroughs to occur.<sup>6</sup> The process would likely require a regional loan<sup>7</sup> or a set of individual country loans to develop the centers of excellence. The centers would be established within higher education institutions.

20. Within each CAREC country, requests for proposals could be sent to higher education institutions regarding a competitive process for setting up centers of excellence in priority areas. Higher education institutions could submit proposals on their own or in collaboration with others to compete for funding under the government loan to establish and operate a center of excellence.<sup>8</sup> The centers should emphasize inter-disciplinary studies and university-industry linkages. The centers would focus on postgraduate teaching and research, and the establishment of centers around the region would form a network of teaching and research excellence in CAREC’s priority areas.

21. The centers would be expected to (i) produce graduates to meet the public and private sectors’ skilled labor demands in key economic sectors; (ii) stimulate domestic and regional research; and (iii) facilitate greater numbers of, and benefits from, regional projects.

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<sup>6</sup> Sandler, 2005.

<sup>7</sup> A regional loan would be a novel product for the multilateral institutions in Central Asia and require new procedures. The key would be finding an appropriate legal entity to serve as the borrower. The Inter-American Development Bank has experience in such loans.

<sup>8</sup> A previous ADB loan project and model for this idea is the 1999 Thailand Higher Education Development Project (HEDP), in which seven specialist consortia of Thai universities were to become centers of excellence in science and technology. The centers in the fields of agricultural, biotechnology, chemistry, energy and environment, environmental and hazardous waste management, environmental science, technology and management, petroleum and petrochemical technology, and post-harvest technology are still functioning.

#### 4. Fellowship program

22. A fellowship program will be considered in 2009 for possible implementation in 2010. The fellowship program would provide scholarships to outstanding participants of CAREC training activities for further short- and possibly long-term training, including overseas. The fellowship program would have two components: (i) for middle-level officials; and (ii) for senior officials who are typically at an advanced stage of their public service career. CAREC fellows would be selected on a competitive basis and provided financial support for further studies at a leading international educational institution.

#### B. Research

23. The research activities of the CAREC Institute are intended to generate new knowledge, innovation, and applied solutions that will facilitate more meaningful and effective regional cooperation for the region's long-term development. The Institute will mobilize the existing research capabilities and expertise within the region in support of regional cooperation and strengthen their capacities by developing a network for joint research initiatives.

24. The research initiatives of the Institute will have practical applications and will not constitute purely academic knowledge. Research initiatives will be undertaken for one or more of the following reasons<sup>9</sup>:

- (i) To generate applied solutions to obstacles in priority areas of regional cooperation.
- (ii) To identify international best practices in regional cooperation and lessons learned.
- (iii) To identify and develop strategies for regional cooperation projects.
- (iv) To generate applications to improve the efficiency of regional cooperation processes.
- (v) To monitor the benefits of regional cooperation and improve their impact.
- (vi) To produce necessary information and knowledge to support evidence-based CAREC programming and policymaking.

25. The Institute will build up a research network to carry out its research program. Prospective members of this network include universities, think tanks, research/policy institutes, and other entities. The majority of the research should be conducted by network members based in the CAREC region, although external institutions or individuals with particular expertise in selected areas could also be brought into the network.

26. Within the broader CAREC Institute research network there is the possibility for concentrated networks in the priority areas of the CAREC Program. The proposed centers of excellence (para. 19) would also support the development of three smaller research networks focused on each of the priority sectors of the CAREC Program to stimulate intensive knowledge exchange and more rapid knowledge breakthroughs.

27. The Institute's management team will ensure the Institute's research outputs are effectively channeled to relevant bodies within the CAREC Program, such as the sectoral coordinating committees on transport, energy, trade facilitation, and trade policy, and various working groups. Reports and summaries of research findings will be distributed to these and

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<sup>9</sup> Additional priority areas for research may be defined in future.

other CAREC bodies, and researchers will be invited to make presentations of the research and offer advice at meetings of the CAREC bodies.

28. Committees and working groups will also have the opportunity to help define the Institute's research agenda. The Institute's management team will solicit feedback on the research needs of the various bodies. Clearly not all information and research needs can be accommodated by the CAREC Institute, but the management team will attempt to incorporate these needs into the broader research program. A budget for research needs of the committees and working groups is planned as part of the operating costs of the Institute.

### **C. Outreach**

29. In addition to the primary activities of training and research, the CAREC Institute will conduct various activities intended to extend its training and research impact more broadly and to foster a broader understanding of the benefits of regional cooperation and the costs of non-cooperation. A vital element of the outreach activities will be the CAREC Institute portal, which will serve as the interface for the virtual Institute. The portal will contain information about the CAREC Institute, its training and research programs, the CAREC Program, and other pertinent information. Modules and other training materials developed under the Institute will be posted on the portal so other training institutions can utilize them and contribute to the human resource development of the region. Research outputs will also be available on the portal to help disseminate knowledge and findings more widely to the public and private sectors.

30. The CAREC Secretariat has begun a "policy brief" series to develop concise papers presenting the key findings of research and important CAREC events and developments. The policy briefs aim to provide senior government officials and other interested stakeholders with succinct and vital information and knowledge to support decision-making and programming. The CAREC Institute will assume responsibility for producing the policy brief series upon its establishment. Policy briefs will be produced in-house or contracted to researchers in the network. Eventually the Institute may consider producing a quarterly newsletter and Central Asian regional cooperation journal for disseminating research it initiates and that of others.

31. An important method of knowledge transfer is the conduct of seminars and workshops. The Institute will organize seminars and workshops on selected priority topics and invite leading experts from the region and around the world to present one or two-day interactive sessions for CAREC policymakers and business representatives. Workshops and seminars, including a "Distinguished Speakers Series," will be designed to promote dialogue among experts, policymakers, and other stakeholders and encourage the application of cutting edge knowledge and best practices to the CAREC Program and within participating governments.

## **IV. KEY ISSUES AND OPTIONS**

32. A number of issues will affect decisions regarding the establishment and operations of the CAREC Institute. This section presents some issues apparent at present and others that may emerge.

33. **Existence of other training and research networks.** The decision to proceed with the CAREC Institute was made in light of the fact that other training and research networks for Central Asia already exist. Examples of these include the Central Asian Gateway (CAG) and the Economic Policy Institutes Network (EPIN). Furthermore, UNDP's Silk Road Initiative, while not an explicit training and research project, holds some similar aspirations and objectives. Hence,

the CAREC Institute enters into what is becoming a rather crowded field. It will be important, therefore, for the CAREC Program to clearly communicate the Institute's purposes and objectives, noting that the CAREC Institute will be distinguished from these existing entities in its primary focus on supporting the needs of regional cooperation in CAREC countries and particularly on the priority sectors of transport, energy, and trade. Furthermore, most of the intended training beneficiaries of the CAREC Institute will be distinct from those of CAG, which, for example, focuses more on journalists and writers.

34. The CAREC Program will also need to inform these other networks that the Institute does not intend to compete with them; rather, it will join them in developing the networks referred to earlier. CAG, EPIN, and other existing Central Asian networks may prove to be suitable partners for conducting some activities of the CAREC Institute.

35. **Crowding out local universities and research institutions.** The Paris Declaration on Aid Effectiveness essentially calls for development institutions to reduce efforts at new institution building and rely on countries' own systems and existing institutions whenever possible. The creation of the CAREC Institute, particularly if it were to take a "bricks and mortar" form, could be perceived by some as crowding out local universities and research institutions for training and research activities. Rather than investing in a new regional institute, some might argue that funds should be entrusted to existing institutions to conduct the planned activities. It will be important to emphasize (and fulfill) the "regional ownership" nature of the CAREC Institute, whereby all member countries have a stake in it and stand to gain from its mutually beneficial outputs and outcomes.

36. **Traditional versus virtual institute.** Questions might emerge about the preferred structure of the CAREC Institute. As will be discussed below, the initial set up of the Institute represents a "virtual institute," whereby the Institute does not require a physical presence (i.e., a building or campus) in any specific location. Virtual institutes and traditional "bricks and mortar" institutes both have unique advantages, but starting with the virtual form is especially prudent in that it does not require large "sunk costs" before tangible benefits are manifested from its outputs. Setting up a new institution with a physical presence from the start might turn out to be an unfortunate use of resources if the institute does not perform well (conversely, successful virtual operation of the CAREC Institute might obviate any need and demand for a permanent, physical presence). An additional complication posed by a traditional "bricks and mortar" structure is the choice of location.

37. **Organizational options.** Several options are available for the organizational structure of the CAREC Institute. This prospectus does not attempted to review and document all of the possibilities, but instead offers a recommended organizational structure for the initial start up as a virtual institute and discusses the possibility of establishing a traditional "bricks and mortar" institute after a careful assessment of the region's needs, and performance of the Institute after the first few years of operation. Effort was made to avoid making the organizational structure of the Institute "top heavy" and bureaucratic with committees and subcommittees. The result is a streamlined, professional institution that makes use of existing CAREC bodies when appropriate.

## V. ESTABLISHING THE CAREC INSTITUTE

38. CAREC countries have endorsed the concept of a CAREC Institute, but details of how to establish it and how it will operate still have to be discussed and agreed on. A general consensus has emerged that the CAREC Institute in its initial stage should take the form of a

virtual institute, which offers substantial advantages by making use of existing institutional resources and minimizing fixed investment costs before tangible benefits are demonstrated. By having a virtual arrangement, the Institute will be sufficiently performance-based in its initial operations to ensure adequate outcomes and benefits to participating countries, and in turn this should help attract the long-term investment (e.g., endowment funds) that would facilitate a traditional physical entity if so desired in future.

## **A. Virtual Institute 2008-2010**

### **1. Review and lessons from other virtual institutes**

39. Advances in information technology (IT) have enabled new forms of education delivery and collaborative research. Many universities, including nearly all major universities in the United States, are now offering synchronous and asynchronous online courses to students on and off campus. Research networks, such as high-level scientific laboratories spread across continents, are also possible because of the advances in IT and the spread of broadband internet connections. In response to the new possibilities for curriculum development, training delivery, and research subjects brought about by IT, several initiatives are underway to develop and run “virtual institutes” that bring experts and resources from various locations into collaborative arrangements for capacity building, research, and policy advocacy. The networks of experts created by these virtual institutes harness complementary expertise without removing the experts from their current employment, which minimizes costs and maximizes the value and impact of the outputs and outcomes from the virtual institutes.

40. A review of five virtual institutes is presented in detail in Appendix 1. The five reviewed were the UNCTAD Virtual Institute, Central Asian Gateway, ASEAN Virtual Institute of Science and Technology, Virtual Institute for Microbial Stress and Survival, and European Virtual Institute for Speciation Analysis.

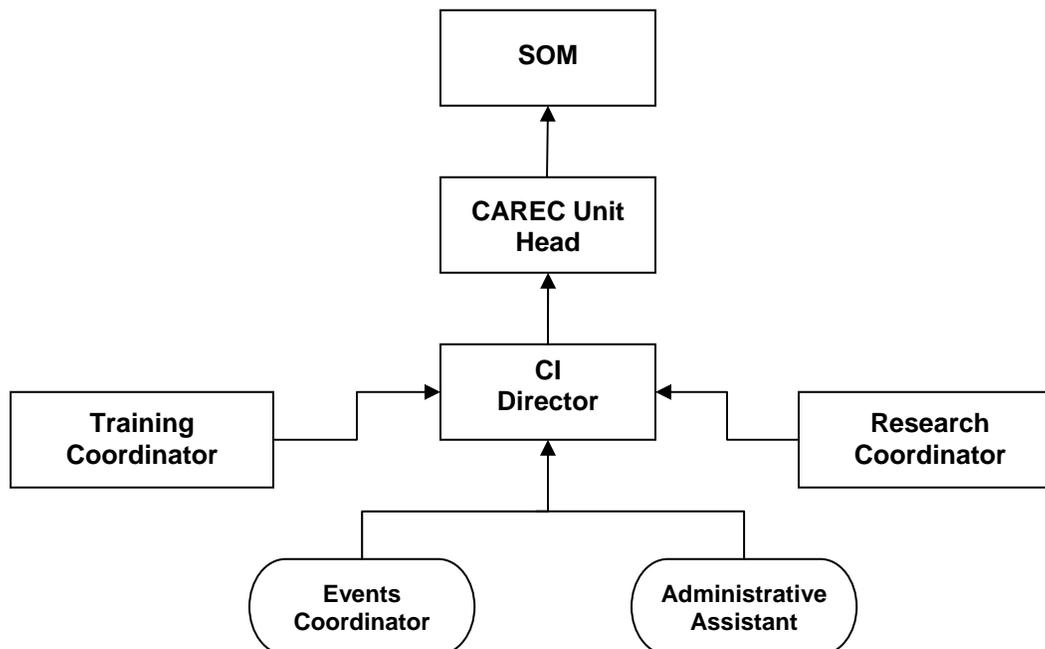
### **2. Institutional setting**

41. In its initial stage, the CAREC Institute would be closely linked with the CAREC Secretariat in ADB for technical and administrative reasons, namely to draw on the human resources and other (e.g., IT) infrastructure the Secretariat can provide, and to facilitate the coordination of CAREC priority agendas into the Institute's planning and activities. The Secretariat will ensure the technical aspects of the Institute portal are provided and supported (either directly by ADB or through a contracting arrangement), along with providing administrative backstopping as necessary to supplement the Institute's staff.

### **3. Proposed structural arrangement**

42. The proposed organizational framework for the initial phase of the CAREC Institute is shown in Figure 1.

**Figure 1. Organizational Chart: CAREC Institute**



43. The Senior Officials' Meeting (SOM) of CAREC will serve as the Institute's steering committee, removing the need to create a separate body for that purpose. The SOM ensures equal representation and opportunity for the CAREC participating countries and development partners to scrutinize the CAREC Institute's performance and provide guidelines for the Institute's strategic directions and activities.

44. The Institute's management team will report to the SOM through the Head, CAREC Secretariat. The management team will consist of a CAREC Institute Director, a Research Coordinator, and a Training Coordinator. (Secondment of officials from the CAREC countries, while an option, is not considered ideal compared to hiring professionally qualified and motivated persons to perform the duties envisaged. The importance of getting the CAREC Institute off to a good start will be critical in determining the success of subsequent phases.) The Director will be responsible for the overall administration of the Institute and the coordination of functions and activities with CAREC participating countries, the multilateral institutions, and partner institutions. The Director will be engaged as a long-term consultant and should be from one of CAREC's participating countries. The recruitment process for the CAREC Institute Director will be led by a search committee. (Suggested details for the recruitment process are found in the Training Needs Assessment appendices.) 2008 will be a transition year to staff the Institute and establish firm procedures, policies, and work program. The future staff size will depend on the evolution of the Institute's work program.

45. The Director will be supported by two coordinators, one for research and another for training. The Research Coordinator will focus on transforming inputs to the CAREC Institute's research activities from CAREC sector committees and working groups into specific programs and research projects. The Research Coordinator will work under the guidance of the Director and coordinate the research programs and projects with the participating partners.

46. The Training Coordinator will convert training needs inputs from the CAREC committees and working groups into specific courses and modules for CAREC Program participants. The Training Coordinator will oversee the development of the curriculum by participating training partners and coordinate execution of the training courses.

47. An Events Coordinator and Administrative Assistant will be engaged to support the work of the management team. Additional administrative support is expected to be provided by the CAREC Secretariat, such as finance and accounting.

48. Draft job descriptions for the management team are found in Appendix 2.

#### **4. Operations and activities**

49. In its first three years of operation, the Institute should focus on five major activities: (i) establishing operating procedures; (ii) developing partnerships for the training and research networks; (iii) finalizing initial training and research agendas; (iv) coordinating implementation of training and research initiatives; and (v) monitoring and evaluation.

50. **Defining operating procedures.** The CAREC Secretariat and the management team will define the guidelines and operating procedures by which the Institute will function. The management team will set up administrative procedures, including financial and activities reporting requirements.

51. **Partnerships and network development.** In its initial phase, the Institute will be particularly reliant on strong and effective networks for training course delivery and research. A major objective during the first year will be for the management team to engage top quality training and research institutions in formal network partnerships for conducting the Institute's training and research initiatives. The institute will need formal agreements, likely in the form of memorandums of understanding (MOUs), with the partners followed by contracts for specific activities. The MOUs will give shape to the training and research networks and should be second priority of the management team following the establishment of operating procedures. Key MOUs for the Institute networks should be in place within the first six months of the Institute's operations.

52. **Training and research agendas.** Indicative training and research agendas have been prepared for this concept paper (Appendix 5), but fine tuning will be necessary. The management team will finalize the agendas in cooperation with relevant network partners.

53. **Coordinating and implementing initiatives.** The Institute is expected to deliver relevant, high-quality outputs in the form of training courses and research projects. Much of the management team's effort will focus on coordinating and implementing the training and research initiatives with network partners. The management team will ensure that all aspects of the training and research initiatives are implemented, that the project partners are working in conjunction with one another when initiatives are done jointly, and that problems and issues that arise are resolved as quickly as possible.

54. **Monitoring and evaluation.** The management team will ensure the training and research initiatives are carried out to high standards by monitoring and evaluating the outputs and outcomes of the Institute's activities. Furthermore, the management team will monitor and assess the performance of the network partners on any activities they carry out on behalf of the Institute. A monitoring and evaluation system will be developed for the internal processes of the

Institute along with standard procedures for evaluating the quality of the outputs and performance of the network partners.

## **5. Financing Arrangements**

55. The CAREC Institute is expected to be co-financed by the multilateral institutions and CAREC countries, but with the bulk of the resources coming initially from the multilateral institutions, and ADB providing seed money during the initial operating period. An estimated budget for the 2008-2010 work plan is presented in section VIII. Co-financing between the multilateral institutions and CAREC countries is desired to instill a stakeholder interest and ownership among the countries and to prepare countries for a gradual transition to assuming greater responsibility for financing the CAREC Institute as its value to the region becomes more apparent.

56. The countries' initial contributions are expected to be mainly in the form of in-kind contributions, although cash co-financing is certainly encouraged and should gradually comprise a greater proportion of their contributions.

### **B. Assessment of the CAREC Institute's Virtual Operations**

57. Following the initial three years of the CAREC Institute in its virtual structure, an assessment will be conducted to determine the most appropriate structural arrangement for the next phase. The assessment will review the Institute in light of its accomplishments, the CAREC Program's needs and demands at the time, the capacities of other institutions and networks in the region, the availability of financing, and other considerations. The assessment should take stock of what the Institute has achieved in its virtual form and determine whether the structure is appropriate or should be altered.

58. Three scenarios can be envisaged for the Institute's second and subsequent phases. First, the Institute could build sufficient capacities within the regionally-based institutions and networks that the capacity building, research, and outreach activities previously conducted and coordinated by the CAREC Institute could be taken over by the CAREC-based institutions. This scenario seems unlikely at present, and therefore it is assumed the CAREC Institute will need to continue performing these important functions.

59. Second, the Institute could continue as a "permanent" virtual institute. If the assessment demonstrates that the achievements of the Institute are due in great part to its' virtual nature, and the key stakeholders are satisfied with its achievements and concur with this view, the Institute might continue indefinitely as a virtual institute. At this point it would be appropriate to consider whether the Institute should become independent of the CAREC Secretariat and greater "ownership" and responsibility assumed by CAREC countries.

60. Third, the Institute could begin the process of transforming into a more traditional "bricks and mortar" institute, with a physical presence somewhere in the CAREC region. A traditional institute would involve a significant commitment of resources on the part of the participating countries and multilateral institutions. Before a decision is made to develop a traditional institute, an assessment should demonstrate clearly the reasons why such an institute would be more effective than the virtual arrangement in attaining the CAREC Institute's goals and objectives.

61. CAREC countries and the multilateral institutions will need to weigh these options carefully after the initial period of operation as a virtual institute. The virtual and traditional

institute forms each have unique advantages in delivering outputs for the CAREC Program. The virtual form is cost-effective, flexible, and can make good use of partners' capabilities. A traditional institute could establish a critical mass of specialists and become a center of excellence to raise standards throughout the region and become a center of policy discussion. Before considering the move to a traditional institute it would be critical to develop, at minimum, high-level, sustained, and strong interest in participating countries and the multilateral institutions in the work and outputs of the Institute. Further, all parties should have a clear understanding of what the virtual institute can deliver in the CAREC context, based on operational experience, before considering how best to move forward. (See Appendix 3 for discussion of issues related to possible future arrangements.)

## **VI. PARTNERSHIPS**

62. The CAREC Institute will rely heavily upon partnerships for the development and delivery of training courses and research activities. The networks for capacity building training courses and research should be viewed as evolving constantly to ensure the best available resource institutions and individuals are harnessed to continually advance the CAREC Program's objectives. This section discusses some potential partners with which the Institute's management team might pursue cooperative arrangements.

63. The Institute's network for training partners will comprise at least four types of organizations: (i) other virtual institutes or capacity building networks; (ii) advanced training institutions; (iii) beneficiary training institutions; and (iv) multilateral institutions. (See Appendix 4 for a list of potential partners in each category.)

64. The Institute's network for research partners will comprise at least five types of potential partners: (i) other research networks; (ii) CAREC-based research institutions; (iii) CAREC multilateral institution partners; (iv) research institutions outside the CAREC countries; and (v) renowned individual experts. (See Appendix 4 for a list of potential partners in each category.)

65. The training and research networks of the Institute will be developed through a set of individual MOUs negotiated between the CAREC Institute and a partner entity rather than forming a multilateral agreement for a formal network. Individual partnership arrangements are more expedient and offer greater flexibility. The MOUs will provide the framework for specific contracts for the development of training modules or courses and/or the delivery of modules or entire training courses, and also for joint research undertakings. With approval from the Head, CAREC Secretariat, the Institute Director will formulate and sign MOUs with partners.

## **VII. INDICATIVE WORKPLAN, 2008-2010**

66. Training activities for 2008-2010 would comprise a series of one to two week courses intended for senior and mid-level government officials. The program would be anchored by two flagship courses with additional courses added in the second and third years. Each course would be targeted for delivery to approximately 24 participants, three from each CAREC country. The initial courses would likely be developed and delivered by advanced institutions from Asia and renowned scholars from elsewhere. The proposed flagship courses (Advanced Management Development Program for Senior Officials, and Cross-Border Infrastructure) would be implemented jointly with a CAREC partner institution to enable a transfer of knowledge and build up of long-term capacity. (An indicative set of training activities that could be carried out in the medium term is presented in Appendix 5.)

67. The Institute would also work with its network partners to prepare and deliver a series of introductory regional cooperation modules designed to introduce government officials and other stakeholders to key regional cooperation concepts and processes, and the CAREC Program. Each module would be developed by a single advanced institutional partner and delivered in the first instance (likely 2008) with at least one beneficiary HRD institution in each of the CAREC countries. The beneficiary HRD institutions will then deliver subsequent training sessions of the modules. Modules can be delivered repeatedly during the year, depending on each country's need for introducing new officials and others to the CAREC Program. The costs of these subsequent module deliveries should be borne by the CAREC countries as part of the in-kind contributions to the CAREC Institute.

68. The fellowship program (see Section II.A.4 above) would commence in 2010 with five scholarships being awarded on a competitive basis. The Institute will seek to increase the number of scholarships per year to 10, depending on budget availability, in subsequent years.

69. The tentative research work plan for 2008-2010 entails a gradual approach assuming the CAREC Institute will need time to establish its operational procedures and develop arrangements with an initial set of partners before implementing a full research agenda. As more partners are brought into the network and depending on budget, more research initiatives can be designed and undertaken. With this in mind, the work plan envisages two research projects in 2008, and three research projects in each of 2009 and 2010. (A tentative and indicative set of research projects is outlined in Appendix 5.) The research work plan for 2008-2010 leaves room for the various CAREC committees and working groups to make specific requests for research needed in support of their work. Requests for research from the committees or working groups should be made to the CAREC Institute Research Coordinator for consideration in light of budget and network partners' availability.

70. Development and launching of the CAREC Institute web portal will be a priority outreach activity in 2008, as the portal will serve as the main means of sharing information, research findings, and training materials. The Institute will develop the CAREC policy briefs series, targeting 3-4 briefs in 2008 and increasing preparation as research projects progress. The Institute will use seminars and workshops strategically to stimulate policy dialogue on priority and timely CAREC issues. (An indicative set of outreach activities is presented in Appendix 5.)

71. The CAREC Institute will regularly report on its activities to the SOM and will prepare a brief annual report on its activities and resource utilization to be submitted to the first SOM of each year (starting 2009).

### **VIII. ESTIMATED BUDGET FOR 2008-2010**

72. Estimated annual budgets for the CAREC Institute in 2008, 2009, and 2010 are presented in Tables 1 through 3 below. These preliminary budgets are based on the work plan presented above (with details in Appendix 5) and are subject to change depending on the availability of funding. The annual operating budget is planned to be scaled up each year during the first three years to correspond to the CAREC Institute's phasing in and scaling up of activities. Initial three-year, all-inclusive costs for operating programs, management and support services are estimated at \$3.85million.

**Table 1. Indicative CAREC Institute Budget 2008**

<b>Line Item</b>	<b>2008 Budget (\$)</b>
<b>I. Operating Programs</b>	
Research	
A. Scheduled projects	150,000
B. Committees and working groups	50,000
Capacity Building	
A. Courses	150,000
B. Modules	25,000
Outreach	
A. Policy briefs	15,000
B. Seminars and workshops	10,000
<b>Total operating programs</b>	<b>400,000</b>
<b>II. Management and Support Services</b>	
Administration	150,000
<b>Office Rent and Utilities</b>	<b>50,000</b>
IT services/Communications	20,000
Travel	50,000
Staff benefits	10,000
Misc Office Expenses	20,000
<b>Total management and support services</b>	<b>250,000</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>700,000</b>

**Table 2. Indicative CAREC Institute Budget 2009**

<b>Line Item</b>	<b>2009 Budget (\$)</b>
<b>I. Operating Programs</b>	
Research	
A. Scheduled projects	380,000
B. Committees and working groups	50,000
Capacity Building	
A. Courses	450,000
B. Modules	15,000
Outreach	
A. Policy briefs	25,000
B. Seminars and workshops	15,000
<b>Total operating programs</b>	<b>935,000</b>
<b>II. Management and Support Services</b>	
Administration	165,000
<b>Office Rent and Utilities</b>	<b>55,000</b>
IT services/Communications	25,000
Travel	55,000
Staff benefits	15,000
Misc Office Expenses	22,000
<b>Total management and support services</b>	<b>337,000</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>1,272,000</b>

**Table 3. Indicative CAREC Institute Budget 2010**

<b>Line Item</b>	<b>2010 Budget (\$)</b>
I. Operating Programs	
Research	
A. Scheduled projects	610,000
B. Committees and working groups	50,000
Capacity Building	
A. Courses	675,000
B. Modules	15,000
C. Fellowship Program	85,000
Outreach	
A. Policy briefs	35,000
B. Seminars and workshops	30,000
<b>Total operating programs</b>	<b>1,500,000</b>
II. Management and Support Services	
Administration	180,000
<b>Office Rent and Utilities</b>	<b>60,000</b>
IT services/Communications	30,000
Travel	60,000
Staff benefits	20,000
<b>Misc Office Expenses</b>	<b>25,000</b>
<b>Total management and support services</b>	<b>375,000</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>1,875,000</b>

## Appendix 1: Review of Other Virtual Institutes

### A. UNCTAD Virtual Institute

<http://vi.unctad.org:8080/unctadvi/secure/unHome.jsf>

#### 1. Overview

1. The UNCTAD Virtual Institute (VI) for trade and development is a “knowledge-sharing program designed to strengthen the capacity of academic institutions, particularly in developing countries, to teach and research trade issues.” Universities play a central role in the UNCTAD arrangement and are recognized for their important roles in building the knowledge and skills for public policymakers and the business sector. UNCTAD VI develops training materials for higher education institutions to use in training postgraduates, government officials, and others in selected trade-related topics. Experts from UNCTAD, WTO, and other institutions provide the foundation for the training materials, which are then transformed as needed into suitable modules for delivery through the UNCTAD VI network.

2. The mission of the UNCTAD VI is to create “a global network of higher learning and research on trade and development issues.” The virtual set up and network with existing institutions in the partnering countries is intended to facilitate sustainable and cost effective means for teaching and researching trade and development. No new physical institutions were established for the program, as training modules are posted on the web site and delivery of training is conducted through the member universities.

3. Capacity building for participating universities is a major focus for the UNCTAD VI and is accomplished through various means, such as making information resources available in the VI online library, sharing online teaching materials that have been modified for the university context, professional development workshops for teaching and researching trade issues, study tours to Geneva for post-graduates, curriculum development advice, facilitating exchanges and cooperation among universities, encouraging teaching and research in trade, and promoting dialogue between trade policymakers and academia.

4. The UNCTAD VI is not a stand alone program. Instead, UNCTAD feeds its existing programs into the VI, which helps to ensure that the VI remains at the forefront of knowledge and activities related to global trade. The various UNCTAD programs work with the VI to convert their existing materials into appropriate university training materials, while other training materials for the VI emerge from workshops held by the programs.

#### 2. Members and Partners

5. Membership to the UNCTAD VI is open to universities and associate membership is intended for individuals. Any higher education institution involved in postgraduate teaching and research on trade is eligible to apply. UNCTAD has a review committee to screen the applicants and determine which ones are suitable for membership. Among the criteria used in evaluating applicant universities are the teaching and research activities of the university, what the university can offer to the UNCTAD VI network, how it could assist other members, and faculty qualifications and research publications. Members and associate members receive access to discussion groups, e-mail notifications about new documents or materials of interest, and the benefit of networking with other specialists in the field. Member universities obtain access to

teaching materials and research from the network, promotion of their teaching and research activities, and more tailored support from UNCTAD.

6. There are currently 20 member higher education institutions from around the world. Another 10 institutions are associate members, but one-third of the overall total of 30 institutions is from Columbia. No Central Asian institutions are among the members, although the VI has representative universities from Belarus, China, Iran, and Ukraine. Nearly 250 individuals have registered as associate members of the VI, and they comprise students, government officials, academics, company representatives, think tank researchers, and international organization representatives.

7. The UNCTAD VI has put together an extensive network of partners from international organizations and donor agencies to complement the member institutions. Partners of the VI include:

**International organizations:**

World Trade Organization, International Trade Center UNCTAD/WTO, United Nations Economic and Social Commission for Asia and the Pacific, United Nations Economic Commission for Africa, and the South Center.

**Donor agencies:**

Canadian International Development Agency, Government of Japan, Government of Finland, Carlo Schmid Program (Germany), and the United Nations Development Account.

### 3. Set Up and Structure of UNCTAD VI

8. The UNCTAD VI has eight staff, and all of them appear to be UNCTAD staff members (it is not clear from the web site what their titles are and how it is structured).

9. The *resources section* of the web site contains reports, papers, presentations, and other materials arranged by topic. Within each category is a list of items, and each one has the title, author, date, and a short abstract or description. Clicking on the document title opens the file for viewing or downloading, although some files are only accessible to members of the VI. Among the categories included under the resources section of the VI web site are commodities, enterprise development, international economic law, investment, trade negotiations, and WTO issues/multilateral trading system.

10. The section on *training materials* is only accessible for members of the VI. Currently the web site has eight training modules posted on (i) "Introduction to Competition Policy," (ii) "Negotiating for Food Security," (iii) "Foreign Direct Investment for Development," (iv) "Impact of Trade Reforms on Developing Countries," (v) "Competitiveness and Development," (vi) "The Economic and Legal Aspects of IIAs," (vii) "Introduction to Negotiation Skills and Strategies," and (viii) "The Economics of Commodities Production and Trade." The section on training materials has a short summary of each set of training materials. Also, members are allowed to provide feedback about the materials by posting comments.

11. The *discussion section* of the web site has selected topics apparently determined by UNCTAD VI staff or the members, and these are open to discussion or viewing only by members. At the time the VI was accessed for this report (late June 2007), only one topic was open for discussion and four others were closed for debate but could still be viewed by

members. UNCTAD VI seemingly wants to manage the discussions and topics very carefully and avoid too many topics being opened at any given time.

12. The VI *news section* of the web site contains updated information about events and activities.

## **B. Central Asian Gateway**

[www.cagateway.org](http://www.cagateway.org)

### **1. Overview**

13. The Central Asian Gateway is a web site devoted to development issues started in 2003 by UNDP and the Center for Economic Research in Uzbekistan. It is currently operated by AKI Press Agency (Kyrgyz Republic), Asia Plus Media Group (Tajikistan), and the Center for Economic Research (Uzbekistan), but UNDP continues to offer support. The Central Asian Gateway intends to facilitate regional cooperation and sustainable development by supporting cooperation between governments and experts in formulating and implementing regional initiatives. The Gateway also aims to build up the capacities of think tanks and the media in policy advice to governments of the region through training and joint research. This will be accomplished through knowledge sharing partnerships and networks. Other objectives of the Central Asian Gateway include:

- Facilitating dialogue on and involvement of regional development stakeholders and others interested in regional cooperation, integration, and trade.
- Providing access to online and offline information on regional cooperation and development.

14. Some of the key issues addressed by the Central Asian Gateway entail good governance, regional integration, private sector development, poverty reduction, economic reforms, civil society development, and democratic governance.

15. The objective of the Central Asian Gateway is to facilitate development and integration of Central Asian countries “through promoting networking among socio-economic research institutions and other development stakeholders, knowledge sharing and experience exchange focusing on the issues of good governance, regional integration, and private sector development.” It aims to support interaction among all who are interested in poverty reduction, economic reforms, civil society development, democratic governance, and other priority directions of development for Central Asia. The portal is intended for civil society, academics, private sector, government officials, international agencies, and other organizations.

16. The operators of CAG expect it to have three major outcomes on Central Asia:

- (i) A mechanism to support decision-making in regional development and cooperation based on expert evaluations of the initiatives, and policy advice for adjusting national policies to regional and national objectives.
- (ii) Online access to international, national, and local knowledge and information on integration efforts, as well as serving as a mechanism for knowledge and experience sharing among government officials, the private sector, and international organizations.

- (iii) An increased role of national think tanks and information agencies in regional development through joint research, dialogue, issue identification, and policy advice.

17. CAG's main activities revolve around capacity building for experts in policy advice, building partnerships for better policy advice, and participatory approaches to regional development and cooperation. Priorities at the moment are (i) organizing the regional research study and experts meeting, which will focus on regional development and economic cooperation; (ii) conducting a needs assessment and training for analytical writing and e-discussions on regional cooperation and development for journalists and experts; and (iii) developing demand-based online resources, databases, and other forms of information on development and integration in Central Asia. Other outputs from CAG are expected to include policy papers, recommendations for regional cooperation from expert meetings, articles about policy studies in regional media, directories of think tanks, and training course materials about online moderation and journalism.

## 2. Structure of Central Asian Gateway

18. The Central Asian Gateway has a Steering Committee comprised of representatives from the strategic partner institutes and UNDP. The Steering Committee is responsible for the overall guidance of the CAG's operations and approves its strategy and workplans.

19. In addition to the three operators of the portal, CAG has 18 partners listed on its web site. The partners are a combination of research centers, foundations, web portals and web sites, and sponsor projects and events.

20. The layout of CAG is shown in Figure A1.1. Aside from the introduction section of the portal, CAG has eight main topics with various sub-headings within each one. Each of these sub-topics contains links within the online database to documents or to external web pages. The eight topics and sub-topics are organized as follows:

- (i) **Governance path:** national strategies, monitoring and evaluation, good governance, and local government
- (ii) **Private sector development:** unleashing private sector, support to private sector, regional cooperation, business environment, statistics, MSME development group, and microfinance
- (iii) **Regional cooperation:** Shanghai Cooperation Organization, Commonwealth of Independent States, Collective Security Treaty Organization, Euroasian Economic Community, Central Asia Regional Economic Cooperation, UN Special Programme for the Economies of CA SPECA, BOMCA/CADAP, Economic Cooperation Organization, and the Silk Road Initiative
- (iv) **Civil society:** civil society in Central Asia, legislation, civil society and poverty reduction, civil society and good governance, civil society and social development, civil society institutions, partnerships, capacity building and sustainability

- (v) **Statistics:** national statistics agencies, statistical initiatives, statistical publications
- (vi) **Research and learning:** Economic Policy Institutes Network, think tanks, training initiatives, the Global Development Learning Network, Central Asian studies worldwide
- (vii) **Information on countries:** Central Asia, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan
- (viii) **Central Asian HDR:** UNDP's 2005 Central Asia Human Development Report

**Figure A1.1: Partial Screenshot of Central Asian Gateway Portal**

Source: Central Asian Gateway web site <www.cagateway.org>

21. Other features of CAG include a built in search engine for searching the databases (searching by category), a calendar of events, news from around the region, and databases on experts, donors, and think tanks. The expert database has a standard format, and the template is apparently completed by the individual without screening or editing by operators of CAG. The donor database is searchable by sector, country, and other categories. The CAG newsletter appears to be a compilation of newswire stories from some the operators and partners.

## C. ASEAN Virtual Institute of Science and Technology (AVIST)

[www.avist.org](http://www.avist.org)

### 1. Overview

22. The ASEAN Virtual Institute of Science and Technology is a “virtual learning network for continuing professional development and advanced studies in science and technology.” AVIST was established as part of the Association of Southeast Asian Nations' (ASEAN) strategy for continuing professional development, and its purpose is to improve the science and technology (S&T) knowledge and skills of the ASEAN workforce through the delivery of S&T continuing education courses. Endorsed in 1999, AVIST commenced operations as a virtual institute in 2002. It remains a virtual institute but works in conjunction with a network of universities within ASEAN countries.<sup>1</sup>

23. Unlike some of the other virtual institutes reviewed here, AVIST is a very focused virtual institute concentrating only on developing and delivering S&T training courses for industry. Research and policy advocacy, common to the other virtual institutes reviewed here, are not current functions of AVIST.

### 2. Set Up and Structure of AVIST

24. The Sub-committee for S&T Infrastructure under the ASEAN Committee on Science and Technology oversees AVIST, and its operations were assigned to the Core Unit at Thailand's National Science and Technology Development Agency Institute. The Core Unit then sub-contracted the Asian Institute of Technology (AIT) to conduct a feasibility study and eventually to develop and operate AVIST's technology. AIT continues to operate AVIST today.

25. AVIST has a relatively heavy organizational structure that offers important lessons for the CAREC Institute. The Sub-committee for S&T Infrastructure is comprised of mostly university representatives instead of government officials that normally constitute ASEAN committees and sub-committees. The sub-committee decided to establish three separate focal points in each ASEAN country for AVIST: a technical focal point, an academic focal point, and an administration focal point. These three focal points come from a ministry and/or government agency along with an academic institution, and all of them are under the authority of the sub-committee representative for the purposes of AVIST. Each country selected its own focal points.

26. Coordination between the Executive Director of AVIST (located at AIT) and the university partners is cumbersome because the Executive Director must make contact through the administration (government official) focal point for AVIST first instead of communicating directly with the university partner. The government focal point person frequently changes, causing further delays and disruptions in communication with the partners. In effect, the Executive Director is unable to function efficiently, nor is the entire network of academic partners able to respond quickly to changing circumstances or opportunities.

27. Being a sub-contractor to Thailand's NSTDA also appears to have hindered AIT's effectiveness with operating AVIST. A more effective arrangement would be to have AIT and AVIST's Executive Director contracted directly as a third party operator of the AVIST network, one that is seen as a neutral entity rather than being perceived as affiliated with one of the

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<sup>1</sup> At present, only one university, Asian Institute of Technology, is offering courses for AVIST.

member countries (which technically AIT is not). The perception that AIT is a Thai institution can lead to claims that AVIST is not entirely unbiased, which might hinder the regional cooperation initiative.

28. AVIST also established an Executive Board and an Academic Board, with seven people in the former and five in the latter. The Executive Board deals with finance and operational matters of AVIST, and the Academic Board approves the types of courses offered. The two boards do not hold meetings in person, but rather confer and make decisions via e-mail.

29. AVIST began with a \$15,000 investment from ASEAN. The low level of funding has continued throughout AVIST's operations and appears to be one of the major obstacles to greater progress of the virtual institute.

30. With the initial investment of \$15,000, AVIST developed three courses to be offered online via the AVIST portal. However, the Executive Director explained that the development team had to contribute extensive time and effort voluntarily because of funding was insufficient.<sup>2</sup> The Executive Director stated that the development team did not face any technology or infrastructure barriers, because AIT already had the skilled technicians, much of the delivery platform for the online courses, and the IT infrastructure (i.e., broadband Internet access) was already in place throughout ASEAN. Thus, funding was only needed to develop appropriate courses through the participating partners, respond to potential customer demands for training, and AVIST operational expenses. UNESCO eventually became involved and contributed approximately \$20,000 to AVIST, but that has since been depleted.

31. An initial three-year plan was developed for AVIST with the express intention of limiting the plan to three years because of the rapid changes in technology. The developers of AVIST wanted to ensure that the project remained demand-based and responded to the ever-changing needs and realities of IT and S&T, and therefore the planning cycles need to be short. The developers believe this type of model, whereby a virtual institute is constantly upgrading its courses' content and delivery platforms through short planning cycles, will be applicable over the long-run due to its ability to respond to changes in demand and new technology. For this reason, there have never been any plans to create a physical institute for AVIST.

### **3. Training Courses and Online Technology of AVIST**

32. Three courses have been designed and offered so far by AVIST. The process for determining the initial three courses involved a common questionnaire distributed to various institutions by the focal points within each ASEAN country. The details of distributing the questionnaire were left up to the individual countries. The ASEAN sub-committee required that AVIST come up with courses that were applicable to all 10 member countries, and consensus had to be reached on the topics. This clearly limited the range of topics for courses that AVIST could come up with because of the disparities within ASEAN in S&T capabilities and knowledge. Singapore's interests and needs would clearly be far more advanced than those of Cambodia, Lao People's Democratic Republic, and Myanmar, for instance, and coming up with agreeable topics for courses took considerable time.

33. CAREC may want to consider permitting courses for the CAREC Institute that are regional in nature (say, applicable to three or more countries) but not necessarily of priority

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<sup>2</sup> Interview with Dr. Kanchana Kanchanasut, Executive Director, AVIST, Asian Institute of Technology, June 20, 2007, Bangkok, Thailand.

interest to all member countries. CAREC has, to a lesser degree than ASEAN, some similar disparities in the level of development and also strategic national economic interests that differ by country. Take for example, hydropower and petroleum resources, which are not distributed evenly throughout Central Asia. Groups of CAREC countries might find mutual priority needs for courses in particular areas that are not necessarily relevant to other CAREC members, but the lack of consensus should not constrain the development of human resources in these areas for regional cooperation because of the significant economic impact of hydropower and petroleum.

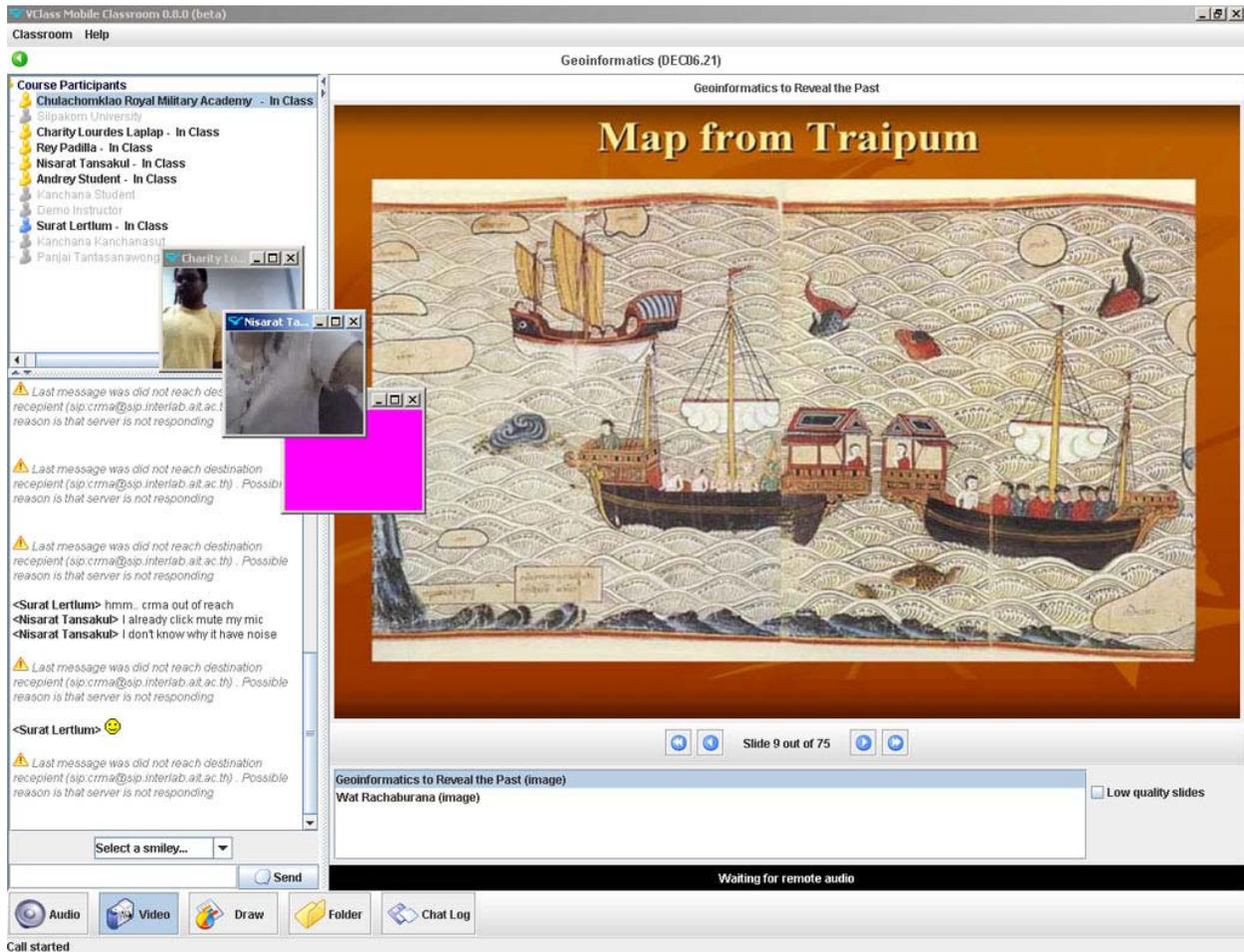
34. AVIST offers online courses using the Open-Source Vclass e-learning platform developed at AIT. The courses are meant to offer greater opportunities for the labor force to increase its skills but also to enhance graduate education in S&T among the participating universities. AVIST is working towards joint accreditation and joint curricula among the participating universities. Enrollment appears open to anyone within the ASEAN region after submitting an application and being accepted into a course. No external courses from institutions other than those formally part of the core network are offered through AVIST, but AIT does operate real-time medical training courses beamed from France to Cambodia's University of Health Sciences.

#### **Box A1.1: AIT's Mobile VClass**

Unlike most higher education institutions that are currently offering online courses and other forms of e-learning, AIT has developed its own Internet-based course delivery and user interface platform. Typically universities purchase licenses for online learning applications developed by software manufacturers, but AIT's own in-house researchers and faculty have developed "Mobile VClass." Mobile VClass builds upon AIT's earlier VClass e-learning platform and came into use in 2006. Mobile VClass enables instructors to remain inside a classroom or laboratory while students participate from anywhere in the world that has a broadband network connection. The Open-Source system does not require the users to have any specially-designed software downloaded into their computer (just a standard Internet browser such as Internet Explorer). Mobile VClass enables AIT to offer asynchronous and synchronous courses to remote learners. Mobile VClass features real-time audio/video conferencing, instant messaging, synchronized slides between the instructor and participants, shared space for interaction, multi-cast whiteboard for diagrams and drawings, and video broadcasts in several formats (see Figure A1.2).

Source: ADB CAREC consultant and based on Mobile VClass brochure

**Figure A1.2: Screenshot of AIT's Mobile VClass E-learning Platform**



Source: AIT's Interlab web site <<http://www.interlab.ait.ac.th/mobclass/images/screen4-large.jpg>>

35. Course fees range from \$60 to \$160 for a three-month or 12-month course, and payments are made by bank transfer (currently only available for AIT).

#### **D. Virtual Institute for Microbial Stress and Survival (VIMSS)**

<http://vimss.lbl.gov/index.html>

##### **1. Overview**

36. The Virtual Institute for Microbial Stress and Survival was established in 2002 through funding from the U.S. Department of Energy Genomics. VIMSS is run by the Lawrence Berkeley National Laboratory at the University of California. Its purpose is to bring together various institutions to further understanding of how bacteria and other microorganisms respond to and survive external stresses.

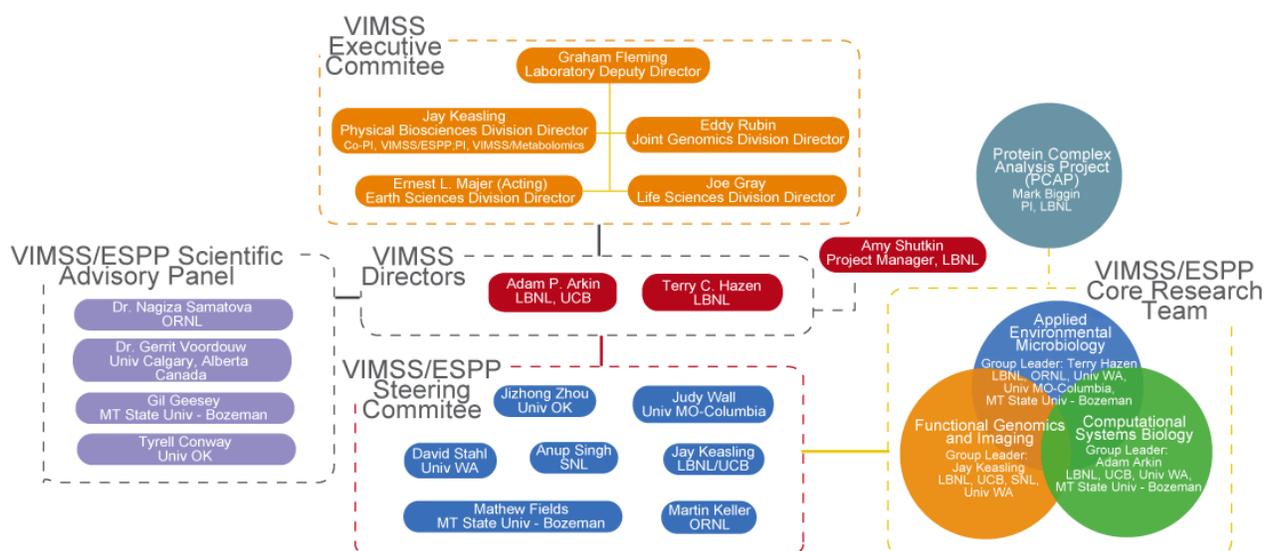
37. VIMSS is a research and information dissemination virtual institute that does not offer training courses or intend to develop capacity of others. The focus is exclusively on enhancing

collaboration among the researchers and laboratories in the network, but also making research data and findings available on a wider scale.

## 2. Set Up and Organization

38. The organizational structure of VIMSS consists of a five-person Executive Committee, two Directors supported by the Project Manager, an international Scientific Advisory Panel, a seven-person Steering Committee, and the Core Research Team (see Figure A1.3 below). The Core Research Team has three groups of consortia national laboratories and universities.

**Figure A1.3: Organizational Structure of the Virtual Institute for Microbial Stress and Survival**



ESPP = Environmental Stress Pathway Project, VIMSS = Virtual Institute for Microbial Stress and Survival (other abbreviations are for laboratories and universities).

Source: VIMSS web site <<http://vimss.lbl.gov/aboutus/organization.html>>

39. The *news and events* section of the web site contains the month's calendar of events and featured news stories. It has sub-sections on news archives, a yearly calendar of events, and meetings and workshops.

40. The *projects and research* section lists the names of the key projects undertaken by VIMSS and has links to more detailed information about each one of them, including the personnel conducting the research.

41. The *findings* section of the web site compiles publications and presentations by researchers involved in the projects.

42. The *data and tools* section offers project databases and applications for accessing them.

## **E. European Virtual Institute for Speciation Analysis (EVISA)**

[www.speciation.net](http://www.speciation.net)

### **1. Overview**

43. The European Virtual Institute for Speciation Analysis is a European Union initiative started in 2002 under the Competitive and Sustainable Growth Program. EVISA is both a legal entity and a virtual institute. The legal entity provides various research and training services to customers and partners.<sup>3</sup>

44. The virtual institute aspect of EVISA is designed to facilitate cooperation among its partners by enabling them to collect, review, and discuss information and knowledge about chemical speciation analysis. The main objectives in operating simultaneously as a virtual institute include: (i) promote the dissemination of information and knowledge to industry and determine new requirements based on feedback from industrial demand; (ii) help industry find solutions to its problems; (iii) improve interdisciplinary cooperation between scientists from different fields; (iv) improve the education of analytical scientists; (v) promote speciation-related science in European policies and rules; (vi) inform policy and rule makers about the state-of-the-art knowledge in the field to help develop the most effective legislation possible; and (vii) promote new research strategies based on actual demand situations in industry and the environment.

### **2. Set Up and Organization**

45. The EU committed to a three-year funding period, at the end of which EVISA was expected to make its operations self-sustainable.

46. The Executive Board consists of five people: the CEO, the Project Coordinator, the Chair of the Advisory Board, the Vice Chair of the Advisory Board, and one untitled person. The CEO is meant to be the leading active person on the Executive Board.

47. Scientists and industry representatives sit on the Advisory Board that supports EVISA's Executive Board. The Advisory Board has 11 members from around Europe and meets twice a year to evaluate the Executive Board's performance. In order to deal effectively with scientific and technical matters outside of Europe, five additional Advisory Board members have been appointed from outside the region.

48. Having perspectives and advice from outside the region may be of similar interest to the CAREC Institute, and thus the founders might want to consider including external advisors in any boards or panels established to guide the research, training, and policy agendas of the CAREC Institute.

49. Partnerships are an important part of EVISA. A network of 35 partners in 10 locations has been established with explicit attention to openness and complementarity among the

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<sup>3</sup> The main objectives of EVISA's activities for its customers and partners are (i) to establish speciation-related solutions in industry that will improve the quality of products, enhance the efficiency of the production processes, and reduce the risk for their employees; (ii) to establish standards, rules, and legislation based on the development of the knowledge and expertise gained within the scientific community actively involved in species related research; (iii) to promote methods and techniques for practical speciation analysis; and (iv) to improve the methods and techniques for speciation analysis with respect to the quality of information provided and their traceability.

partners. The partners come from industry, analytical services, universities, and research institutes.

50. The EVISA portal provides extensive information with its online database, which contains studies, reference materials, standards, standard operating procedures, relevant legislation, and other resources. News, a newsletter, and a calendar of events keep people up-to-date on what is occurring within the field, and the discussion forum allows people to interact, exchange ideas, and network online. EVISA also provides a directory of institutions and scientists involved in speciation. For students, EVISA posts open positions for graduates, postgraduates, and post-doctorates.

51. A reference section of the portal entitled “About speciation” contains reference materials, a directory of scientists, definitions, and other information. Worthy of note is a special web page on “Problems to be solved,” which discusses some of the key issues facing the industry that need to be addressed. This helps to provide priority direction for researchers in order to tackle some of the major problems hindering the advancement of the industry. CAREC could learn from this and apply similar web pages to its CAREC Institute that set forth the key issues needing to be addressed in the priority areas of regional cooperation. Researchers wishing to contribute will then have a clearer understanding of how they can conduct relevant research.

Figure A1.4: Screenshot of the EVISA Portal

The screenshot shows the EVISA portal homepage. At the top, there is a navigation bar with links for Training, QA/QC, Analytical Services, Database, Consultancy, Research, Newsletter, and Vacancies. Below this, the main content area is divided into several sections. On the left, there is a sidebar with a search bar and a list of links including 'EVISA - Who we are', 'About Speciation', 'Discussion Forum', 'Services', 'Links', and 'Glossary'. The central part of the page features a large heading 'Welcome to the European Virtual Institute for Speciation Analysis (EVISA)' followed by a section titled 'a European Network:' which lists several bullet points: 'offering new and profitable strategies for enterprises to improve quality of industrial processes and products', 'enhancing the cost/benefit ratio of analytical measurements by enhancing the information value', and 'making the collective knowledge of the world's experts in speciation analysis easily accessible'. Below this, there is a list of services EVISA offers, such as 'Effective and efficient consulting', 'Professional analytical services', 'Quality assurance-related activities', 'Fit-for-purpose analytical developments', 'Expert training activities', 'Concise web portal with discussion forum, news section, directory of scientists, calendar of events, list of vacant positions', 'Comprehensive databases covering literature, reference materials, standards, standard operating procedures etc.', and 'Information about toxicity, bioavailability, legislation for metal and metalloids species'. On the right side, there is a section for 'Events' with a list of upcoming conferences, including the '15th International Conference on Cyclochromes P450' and 'NASTEC 2007'. There is also a user login section with fields for 'User:' and 'Password:' and a 'GO' button. The bottom of the page contains a footer with the text 'Source: EVISA portal <www.speciation.net>'.

Source: EVISA portal <www.speciation.net>

52. Under the *services* section of the portal, EVISA has an online form that can be completed by anyone interested in having any of its partners perform applied research or offer consultancy services. The form is handled centrally by the virtual institute and appears to be then forwarded to the appropriate partner(s) in the network based on the nature of the request

from the inquirer. Likewise for analytical services, the virtual institute acts as a broker between inquiries coming via the portal and the partners in the network.

53. The *database* section of the portal offers information available to the public, such as a calendar of events, a list of industry journals, a book list, a certified reference materials list, a directory of scientists, and links to other web sites. Additional information from the database is available only to subscribers, and these materials include a literature database, standards and other materials, a company database, and standard operating procedures.

54. Other sections of the portal are *external links*, a monthly *newsletter*, *vacancies* for graduates, postgraduates, and post-doctorates, and an online *glossary* of terms.

### **3. Services and Benefits**

55. EVISA offers industry a wide range of services such as training courses, consulting, analytical services, and quality assurance. The training services consist of workshops and training courses provided by EVISA's partners in various countries, along with the gradual accumulation of multi-media tutorial materials and training documents that are disseminated through the Virtual Institute. The applied research services are conducted through EVISA's network of universities and national laboratories around Europe.

56. Other functions of EVISA entail coordinating and supporting workshops, symposiums and roundtables, others' training courses, and comparative laboratory results.

57. In addition to receiving services, the benefits to EVISA's partners are having a framework for efficient cooperation (managing knowledge and promoting contacts and exchange of information), EVISA acting as a research broker, and a quality label (by means of standards in methods, training, and quality assurance).

## **Appendix 2: CAREC Institute Management Team Indicative Job Descriptions**

The following are presented as indicative job descriptions for CAREC Institute's management team.

### **Director**

- A national of a CAREC country.
- Upon the advice and directions of the SOM and CAREC Unit Head, initiate, coordinate, implement, and monitor Institute activities and projects.
- Formulate annual operating plans for approval by the SOM.
- Prepare and submit the annual budget of the Institute for approval by the SOM.
- Develop partnerships with suitable regional and external institutions to carry out the Institute's training and research agendas.
- Lead coordination with other CAREC institutions, CAREC governments, multilateral institutions, and partners (public and private) in the implementation of the Institute's programs and activities, including preparing implementation strategies.
- Ensure that other CAREC institutions are informed about relevant developments and activities of the Institute.
- Prepare an annual report on the Institute's activities, financial status, and other important matters for submission to the SOM for approval.
- Supervise the work of all other members of the management team and administrative staff.
- Ensure appropriate records and other documents and data are properly compiled into a database.
- Sign all important communications, release of funds, and purchase orders for the CAREC Institute.

### **Research Coordinator**

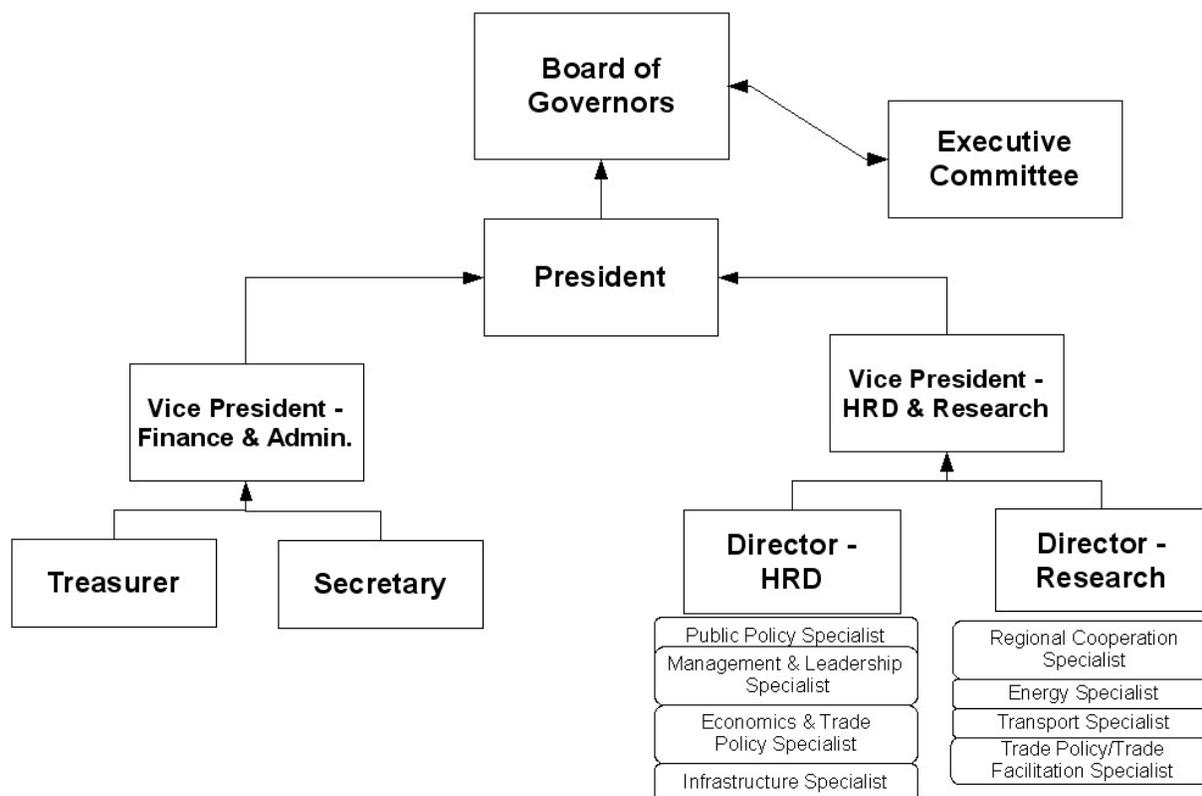
- Under the direction of the SOM and the CAREC Unit Head and advice of the Director, formulate the research agenda of the Institute and prioritize specific projects.
- Coordinate the research activities among the network of partners working on Institute research initiatives, and facilitate the communication and sharing of information among network partners.
- Monitor and prepare progress reports on Institute research programs and projects.
- Assist the research network partners in developing appropriate policy advocacy channels for applied research within the CAREC framework and the participating governments.

### **Training Coordinator**

- Under the direction of the SOM and the CAREC Unit Head and advice of the Director, formulate the training agenda of the Institute and prioritize specific courses on regional cooperation in CAREC's priority areas.
- Coordinate the curriculum development and training delivery among the network of partners working on Institute HRD initiatives, and facilitate the communication and sharing of information among network partners.
- Monitor and prepare progress reports on Institute training courses.
- Assist the training network partners in developing appropriate policy advocacy channels within the CAREC framework and the participating governments.

### **Appendix 3: Possible Future Arrangement for the CAREC Institute**

1. The major activities related to the establishment of a more formal CAREC Institute during the transition period would be preparations for an endowment fund and establishing a permanent location. The Director would lead efforts to establish an endowment to fund a significant part of the CAREC Institute's operational costs in perpetuity. A portion of the annual earnings from the invested funds would be spent on the Institute's programs. A realistic target for an initial endowment is probably \$20-30 million, but at this point there are no tangible indicators of how much the member governments, MIs, and donors would be willing to contribute.
2. The CAREC Institute should have a single, permanent location if a “bricks and mortar” institute is to be established. Rotating arrangements for the Institute would not be effective, as they raise costs, disrupt administrative processes and programming, cause gaps and “memory loss” within an institution, and hinder prospects for hiring high quality permanent staff.
3. The Director, under the guidance of the Head, CAREC Secretariat, would spearhead a site selection process for the CAREC Institute's future home. The Executive Board, if established, or a site selection committee appointed by the SOM, would rate possible sites and ultimately select the location for the CAREC Institute during a process managed by the Director.
4. Also during the transition period, the CAREC SOM would prepare a list of nominees for governors to form the CAREC Institute's Board of Governors.
5. Preparations for recruiting professional staff for the programs would be undertaken during the transition, whereby the Director would prepare and advertise recruitment notices for the capacity building and research programs positions.
6. If the CAREC Institute were to become a formal “bricks and mortar” institute at a later date, it is recommended that the CAREC Institute become an independent, non-profit legal entity within one of the CAREC countries. As such, it would no longer be attached to or drawing on the personnel and financial resources from the CAREC Secretariat for its operations, although grants for special programs from ADB and other donors will be welcomed. The mandate for the CAREC Institute would remain the same if it were to become a “bricks and mortar” institute, but changes would occur to the Institute's setting, its structure and how it delivers the outputs, and the financing mechanisms.
7. A possible organizational structure for a formal CAREC Institute is shown in Figure A3.1.

**Figure A3.1. Organizational Structure for a Formal CAREC Institute**

8. With a legal and independent status for a formal CAREC Institute, the CAREC SOM would no longer have a direct role in the Institute, except with the nomination of members of a Board of Governors for decision by the CAREC Ministerial Meeting. A Board of Governors would govern the business and affairs of the Institute, oversee the general directions and management of the Institute, and safeguard the independence of the Institution's work. Details about a Board of Governors can be found in Appendix 3. The other positions shown in the organization chart above are also discussed in Appendix 3.

9. In contrast with the virtual set up, a “bricks and mortar” CAREC Institute would employ its own capacity building (trainers) and research staff. The intention should not be to make it into a university, but rather to provide certain regular priority capacity building courses to support regional cooperation and assemble a critical mass of leading researchers in the CAREC Program's priority areas. The objective of having its own staff would not be to make the CAREC Institute self-sufficient in training and research, but rather to have an in-house capacity to initiate and lead selected capacity building and research activities while continuing to utilize the networks developed during the virtual institute years.

10. Securing an endowment would cover a significant portion of the CAREC Institute's annual operating costs if the Institute were to be formalized. For comparative purposes, the Brookings Institution in the United States had as of 2006 a \$253 million endowment and an

annual operating budget of nearly \$50 million.<sup>4</sup> The Brookings Institution's endowment covers 22% of its operating costs, or approximately \$11 million, meaning the interest rate on the endowment is around 4.3%.

11. The CAREC Institute would likely need to rely on the interest from the anticipated endowment for at least 50% of its operating budget, possibly even closer to 75%, with the remainder coming from grants and annual contributions from the member countries. At an interest rate of 4.3% and an estimated operating budget of at least \$1.78 million at this later stage, the CAREC Institute would need an endowment of over \$20 million to cover 50% of the estimated annual operating costs or \$31 million to cover 75% of the annual operating costs. Appendix 3 presents various annual operating costs and the target for an endowment under the 50% and 75% of costs scenarios.

12. The remaining 25-50% of an annual operating budget would be expected to come from grants and donations by MIs, bilateral donors, philanthropic organizations and foundations, corporate entities benefiting the CAREC Institute's training and research, network partners, and CAREC governments. The CAREC Institute would need to ensure that its outputs and outcomes are relevant to the broader stakeholders, such as corporate entities and philanthropic organizations, in order to obtain the necessary financial support for its activities; otherwise the burden will fall on the governments to make up any shortfall in the finances needed to maintain the quality and effectiveness of the Institute's work.

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<sup>4</sup> The Brookings Institution. *The Brookings Institution 1916-2006: Annual Report 2006*.

## Appendix 4: Potential Partnerships

### A. Capacity Development

1. The CAREC Institute's network for capacity building partners will comprise at least four types of organizations: (i) other virtual institutes or capacity building networks; (ii) advanced capacity building institutions; (iii) beneficiary capacity building institutions; and (iv) multilateral institutions.

2. The following lists present potential partners in each category.

(i) Other virtual institutes or capacity building networks:

- UNCTAD Virtual Institute (for training on trade issues and WTO)
- EPIN (for training on policy analysis and policy paper writing)

(ii) Advanced capacity building institutions:

- Harvard University's Kennedy School of Government
- Tsinghua University's School of Public Policy
- National University of Singapore's Lee Kuan Yew School of Public Policy
- World Trade Institute
- Oxford University's Said Business School
- University of Uppsala
- Kazakhstan Institute of Management, Economics, and Strategic Research (<http://www.kimep.kz/>)
  - Master of Public Administration
  - Master of International Relations
  - Master of Business Administration
  - Master of Arts in Economics
- McKinsey and Company
- MacQuarie Group (investment banking)
- Asian Institute of Technology

(iii) Beneficiary capacity building institutions:

Country	University/Institution	Web site
Afghanistan	Kabul University	<a href="http://www.ku.edu.af/">http://www.ku.edu.af/</a>
	Polytechnical University of Kabul <ul style="list-style-type: none"> <li>• Faculty of Construction</li> </ul>	<a href="http://www.polytechnic-kabul.org/">http://www.polytechnic-kabul.org/</a>
Azerbaijan	Azerbaijan International University <ul style="list-style-type: none"> <li>• School of Transport</li> <li>• School of Oil and Gas</li> <li>• School of Civil Construction</li> <li>• School of International Economic Relations</li> <li>• School of Legal Regulation of Economics</li> </ul>	<a href="http://www.abu.az">www.abu.az</a>

Country	University/Institution	Web site
	<ul style="list-style-type: none"> <li>• School of Customs</li> <li>• School of State and Municipal Management</li> <li>• School of Taxation</li> <li>• School of International Law</li> </ul>	
	Azerbaijan State Economic University <ul style="list-style-type: none"> <li>• School of International Economic Relations</li> <li>• School of Finance</li> <li>• School of Commerce</li> <li>• School of Regulation of Economy</li> </ul>	<a href="http://www.aseu.az/4.swf">http://www.aseu.az/4.swf</a>
	Azerbaijan State Oil Academy	<a href="http://adna.jis.az/">http://adna.jis.az/</a>
	Baku State University	<a href="http://www.bsu.az">www.bsu.az</a> (unable to access)
China (Xinjiang Uygur Autonomous Region only)	Shihezi University	<a href="http://www.shzu.edu.cn/">http://www.shzu.edu.cn/</a> (Chinese language web site)
	Xinjiang Normal University <ul style="list-style-type: none"> <li>• College of Law and Economy</li> </ul>	<a href="http://www.xjnu.edu.cn/">http://www.xjnu.edu.cn/</a>
	Xinjiang University	<a href="http://www.xju.edu.cn/">http://www.xju.edu.cn/</a> (Chinese language web site)
Kazakhstan	Eastern Kazakhstan State University	
	Economical University of Karaganda	<a href="http://www.keu.kz/en/">http://www.keu.kz/en/</a>
	Institute of the Development of Kazakstan	
	Karaganda State Technical University <ul style="list-style-type: none"> <li>• Faculty of Telecommunications</li> <li>• Road-Transport Faculty</li> </ul>	<a href="http://eng.kstu.kz/">http://eng.kstu.kz/</a>
	Kazakh National Technical University	<a href="http://www.ntu.kz/">http://www.ntu.kz/</a> (Russian and Kazakh languages web site)
	Kazakh State Academy of Management	
	Kazakh State National University	
	Northern Kazakhstan University	
	Pavlodar State University <ul style="list-style-type: none"> <li>• Faculty of Finance</li> </ul>	<a href="http://www.pgu.kz">www.pgu.kz</a>
	Qustanay State University	
	Semey State University	
	University of Central Asia	<a href="http://www.ucentralasia.org">www.ucentralasia.org</a>
Kyrgyz Republic	Academy of Management under the President of Kyrgyz Republic	
	Bishkek State Institute of Economics and Commerce	
	Issyk-Kul State University	<a href="http://www.iuk.kg">www.iuk.kg</a> (unable to access site)
	Kyrgyz National University of Jusup	<a href="http://university.kg/web/guest/home">http://university.kg/web/guest/home</a>

Country	University/Institution	Web site
	Balasagyn <ul style="list-style-type: none"> <li>• Customs Faculty, Institute of Integration of the International Educational Programs</li> <li>• Department of Economy, Institute of Target Preparation of Students</li> <li>• Institute of Fundamental and Social Researches</li> <li>• Center of Management and Business</li> </ul>	
	Kyrgyz-Russian Slavic University	<a href="http://www.krsu.edu.kg/#">http://www.krsu.edu.kg/#</a> (Russian language web site)
	Kyrgyz State University of Construction, Transportation and Architecture	
	OSCE Academy, Bishkek	<a href="http://www.osce-academy.net/en/">http://www.osce-academy.net/en/</a>
	Osh State University	<a href="http://www.oshsu.kg">www.oshsu.kg</a> (unable to access site)
	University of Central Asia	<a href="http://www.ucentralasia.org">www.ucentralasia.org</a>
Mongolia	Mongolian University of Science and Technology <ul style="list-style-type: none"> <li>• School of Geology and Petroleum Engineering</li> <li>• School of Power Engineering</li> <li>• School of Civil Engineering</li> </ul>	<a href="http://www.must.edu.mn/beta2/index.php">http://www.must.edu.mn/beta2/index.php</a>
	National University of Mongolia	<a href="http://num.edu.mn/">http://num.edu.mn/</a> (Mongolian language web site)
Tajikistan	Khöjand State University	
	Khorog State University	
	Technological University of Tajikistan	<a href="http://tut.freenet.tj/">http://tut.freenet.tj/</a> (Russian language web site)
	Tajik-Russian Federation Slavonic University	
	Tajik State National University	
	Tajik State University of Law, Business and Policy	
	University of Central Asia	<a href="http://www.ucentralasia.org">www.ucentralasia.org</a>
Uzbekistan	Bukhara State University	
	Farghana State University	
	National University of Uzbekistan	<a href="http://www.nuu.uz/">http://www.nuu.uz/</a> (Uzbek language web site)
	Samarkand State University <ul style="list-style-type: none"> <li>• Faculty of Economics</li> </ul>	<a href="http://www.samdu.uz/">http://www.samdu.uz/</a>
	Tashkent Financial Institute <ul style="list-style-type: none"> <li>• General Economics Faculty</li> </ul>	<a href="http://eng.tfi.uz/">http://eng.tfi.uz/</a>

Country	University/Institution	Web site
	<ul style="list-style-type: none"> <li>• Financial Economic Faculty</li> <li>• Management Faculty</li> <li>• Accounting Economic Faculty (Department of Financial Analysis)</li> </ul>	
	Tashkent State University of Economics	<a href="http://www.tsue.uz/">http://www.tsue.uz/</a> (Russian language web site)
	University of World Economy and Diplomacy (part of Ministry of Foreign Affairs)	<a href="http://www.uwed.uz/">http://www.uwed.uz/</a> (Uzbek language web site)

(iv) Multilateral institutions (focusing on regional cooperation and integration):

- Asian Development Bank
- World Bank
  - Economic Development Institute (also known as World Bank Institute)
- UNESCAP (linkage with SPECA)
- United Nations Economic Commission for Europe (UNECE) (linkage with SPECA)
- World Trade Institute

## B. Research

3. The Institute's network for research partners will comprise at least five types of potential partners: (i) other research networks; (ii) CAREC-based research institutions; (iii) CAREC multilateral institution partners; (iv) research institutions outside the CAREC countries; and (v) renowned individual experts. The following lists present potential partners.

(i) Other research networks:

- EPIN
- Central Asia-Caucasus Institute Silk Road Studies Program (US office at Paul H. Nitze School of Advanced International Studies, Johns Hopkins University; European office at Department of Eurasian Studies, Uppsala University) (<http://www.silkroadstudies.org/new/>)

(ii) CAREC-based research institutions

Country	Institution	Web site
Afghanistan	Afghanistan Academy of Sciences	
Azerbaijan	Azerbaijan State Oil Academy	<a href="http://adna.jis.az/">http://adna.jis.az/</a>
	Azerbaijan National Academy of Sciences <ul style="list-style-type: none"> <li>• Social Sciences Department</li> </ul>	<a href="http://www.science.az/">http://www.science.az/</a>
	Center for Strategic Studies	
	Institute of Strategic Studies of the	<a href="http://www.ca-c.org/info-issc-e.shtml">http://www.ca-c.org/info-issc-e.shtml</a>

Country	Institution	Web site
	Caucasus	
China (Xinjiang Uygur Autonomous Region only)	Xinjiang Academy of Social Sciences	
Kazakhstan	National Academy of Sciences	
	Kazakhstan Institute of Management, Economics and Strategic Research	<a href="http://www.kimep.kz/">www.kimep.kz/</a>
	Kazakhstan Institute for Strategic Studies	<a href="http://www.kisi.kz/">http://www.kisi.kz/</a>
Kyrgyz Republic	Academy of Sciences	
	OSCE Academy	<a href="http://www.osce-academy.net/en/">http://www.osce-academy.net/en/</a>
Mongolia	Mongolian Academy of Sciences <ul style="list-style-type: none"> <li>● Mongolian Development Institute</li> <li>● Institute of International Studies</li> </ul>	<a href="http://www.mas.ac.mn/en/">http://www.mas.ac.mn/en/</a>
	Mongolian University of Science and Technology <ul style="list-style-type: none"> <li>● Research Center of Renewable Energy and High Voltage</li> <li>● Center of Energy Conservation</li> </ul>	<a href="http://www.must.edu.mn/beta2/index.php">http://www.must.edu.mn/beta2/index.php</a>
Tajikistan	Academy of Sciences of Tajikistan	<a href="http://www.tajik-gateway.org/">http://www.tajik-gateway.org/</a> (see under science link)
	Institute of World Economy and International Relations	
Uzbekistan	Institute of Economics, Academy of Sciences	<a href="http://www.academy.uz/">www.academy.uz/</a> (unable to access) <a href="http://www.uzsci.net/">http://www.uzsci.net/</a> (alternatively)
	Institute for Strategic & Regional Studies under the President of the Republic of Uzbekistan	

## (iii) CAREC multilateral institution partners

4. Some of the multilateral institutions involved in CAREC have research capabilities with in-house research teams. ADB has its Economics Research Department and several researchers assigned to other departments who can be mobilized for CAREC Institute research initiatives. The World Bank has an extensive research capacity with 10 programs at present, such as Trade, Macroeconomics and Growth, Finance and Private Sector Research, and Sustainable Rural and Urban Development. The IMF has a Research Department in Washington, but its country offices are more likely partners in CAREC Institute research initiatives.

## (iv) Non-CAREC research institutions

5. Many of the non-CAREC research institutions are focused more on traditional security and political issues than economic development and regional cooperation, and therefore they should be approached cautiously for cooperative research endeavors.

<b>Country</b>	<b>Institution</b>	<b>Web site</b>
Belgium	European Institute for Asian Studies (EU-affiliated)	<a href="http://www.eias.org/">http://www.eias.org/</a>
Canada	Central and Inner Asia Studies, Asian Institute, University of Toronto	<a href="http://www.utoronto.ca/cias/">http://www.utoronto.ca/cias/</a>
Sweden	Department of Eurasian Studies, Uppsala University	<a href="http://www.eurasia.uu.se/index2.html">http://www.eurasia.uu.se/index2.html</a>
	Institute for Central Asian and Caucasian Studies	<a href="http://www.ca-c.org/infoe.shtml">http://www.ca-c.org/infoe.shtml</a>
United States	Caucasus and Central Asia Program, University of California – Berkeley	<a href="http://ist-socrates.berkeley.edu/~bsp/caucasus/">http://ist-socrates.berkeley.edu/~bsp/caucasus/</a>
	Central Eurasia Project, Open Society Institute (Soros Foundation)	<a href="http://www.soros.org/initiatives/cep">http://www.soros.org/initiatives/cep</a>
	McKinsey Global Institute	<a href="http://www.mckinsey.com/mgi/rp/">http://www.mckinsey.com/mgi/rp/</a>
	Program on Central Asia and the Caucasus, Harvard University	<a href="http://centasia.fas.harvard.edu/">http://centasia.fas.harvard.edu/</a>
	RAND Center for Russia and Eurasia	<a href="http://www.rand.org/nsrd/cre/">http://www.rand.org/nsrd/cre/</a>

### Appendix 5: Indicative Work Plan (details) 2008-2010

1. This appendix presents the indicative work plan. An indicative list of capacity building activities is presented in Table A5.1. An indicative research agenda is presented in Table A5.2. An indicative list of outreach activities is presented in Table A5.3.

**Table A5.1: Indicative Capacity Building Workplan 2008-2010**

2008		2009		2010	
Title	Type	Title	Type	Title	Type
Advanced Management Development Program for Senior Officials (flagship course)	Course	Advanced Management Development Program for Senior Officials (flagship course)	Course	Advanced Management Development Program for Senior Officials (flagship course)	Course
Cross-Border Infrastructure (flagship course)	Course	Cross-Border Infrastructure (flagship course)	Course	Cross-Border Infrastructure (flagship course)	Course
Rationale, Principles, and Benefits of Regional Cooperation	Module	Trade Policy and Practice	Course	Trade Policy and Practice	Course
Introduction to the CAREC Program	Module	Public Policy for Regional Cooperation	Course	Public Policy for Regional Cooperation	Course
Regional Cooperation Arrangements and Processes in Central Asia	Module	Energy Regulation	Course	Energy Regulation	Course
		Strategic Negotiations	Course	Mastering Negotiations: Building Sustainable Agreements	Course
		Rationale, Principles, and Benefits of Regional Cooperation	Module	Leadership for Development	Course
		Introduction to the CAREC Program	Module	Management Development Program for Middle-Level Officials	Course
		Regional Cooperation	Module	GMS Study Visit: Showcasing the	Study tour

2008		2009		2010	
		Arrangements and Processes in Central Asia		Benefits of Regional Cooperation	
				Rationale, Principles, and Benefits of Regional Cooperation	Module
				Introduction to the CAREC Program	Module
				Regional Cooperation Arrangements and Processes in Central Asia	Module

**Table A5.2: Indicative Research Workplan 2008-2010**

Research Initiative	Timeframe
<p><b>Experience of other regional cooperation initiatives and organizations -- lessons for CAREC</b></p> <p>Description: Building on Brookings Institution's forthcoming preliminary study of regional initiatives/organizations, analyze the hypotheses and preliminary lessons expected to be generated. Also link this research initiative with the evaluation of CAREC which is being prepared by ADB's Operations and Evaluation Department.</p>	2008 – 4 months
<p><b>Benefits and costs of regional cooperation and integration</b></p> <p>Description: The UNDP Human Development Report and the ADB "3Ts" reports each tried to estimate as rigorously as possible the benefits and costs of regional cooperation and integration. Some of the key findings are now frequently cited in the policy debate as evidence for the importance of regional cooperation. However, many of the estimates had to remain partial, were based on limited analysis and information, and in general did not add up to much more than rough estimates. Further research would deepen and expand the analysis in the area of trade, transport, energy, water and financial integration. The analysis would also be expanded to assess more carefully the winners and losers of regional cooperation/integration for a better understanding of the political economy of regional cooperation and a better assessment of what could and should be done to reduce the burdens on those countries or subnational areas that are adversely affected or gain relatively less than others.</p>	2008 – 5 months
<p><b>Other research initiatives requested by CAREC committees and working groups: to be determined</b></p>	2008
<p><b>Exploration of regional cooperation and integration performance indicators</b></p> <p>Description: In line with the Comprehensive Action Plan's (CAP) proposal that performance indicators be used to measure progress with regional cooperation and integration, this research initiative would entail a systematic development and assessment of possible indicators for CAREC.</p>	2009 – 6 months
<p><b>Review of linkages between national development plans/programs and regional development strategies/programs</b></p> <p>Description: National and sectoral investment programs and budgets are commonly</p>	2009 – 6 months

Research Initiative	Timeframe
<p>formulated without consideration of regional aspects or without reference to regional plans and strategies. Similarly, regional plans and strategies are generally prepared without reference to national plans. This study would review actual plans and planning practice at the national and regional level for CAREC in terms of linkages and consistency and make recommendations for how national and regional strategic and programming could be better linked. This analysis could also be extended to assess the links between national and regional donor programs.</p>	
<p><b>Financial sector integration and FDI in Central Asia</b>            Description: Cross-border financial flows (including FDI) into and within Central Asia have unexpectedly and rapidly increased in recent years. As a part of looking ahead to potential cooperation areas and as part of the “second tier” activities endorsed at the 2006 Ministerial Meeting, this initiative intends to provide analytical support and advice, support for improved regional financial institutional development, and guidance on key regulatory and policy parameters. This research would lead to a better understanding of current trends and issues in financial sector integration in the region and would lay the ground for possible future engagement by CAREC in this area.</p>	2009 – 4 months
<p><b>Other research initiatives requested by CAREC committees and working groups: to be determined</b></p>	2009
<p><b>Alternative scenarios for free trade zones and customs unions</b>            Description: Despite many proposals by the leaders of Central Asia and its major neighbors calling for free trade zone or customs unions, no serious progress has been made towards this goal. A careful analysis of past proposals, of their shortcomings and obstacles, of relevant experience for other regions, and in consideration against the background of recent or impending WTO membership of several countries in the region, would provide an updated policy-relevant set of recommendations for CAREC and its member countries on how to approach the continuing interest by the regional leaders and organizations in this topic.</p>	2010 – 5 months
<p><b>Opinion survey of key public perceptions and attitudes related to regional cooperation and integration</b>            Description: In connection with the preparation of the UNDP Central Asia Human Development Report the World Bank financed an opinion survey of 1,000 individuals in each of four Central Asian countries which yielded very interesting insights into public perceptions, attitudes and characteristics relevant to regional cooperation and integration. Based on that baseline survey, this research initiative would entail follow-up surveys to update the information and determined changes and trends throughout the region and across countries. These surveys could also serve as an input into the performance indicators for the study on “Exploration of regional cooperation and integration performance indicators.”</p>	2010 – 6 months
<p><b>Long-term water resource sustainability and management in Central Asia</b>            Description: This research topic is also from the “second tier” CAREC activities that were endorsed in 2006. Central Asia's water resource management issues are well known and represent major challenges for regional cooperation. The long term prospects for water availability for Central Asia appear to be threatened because of global warming and due to specific regional factors. The research would focus on the long-term prospects of water resource availability and sustainability in Central Asia and draw conclusions for medium to long-term water resource management.</p>	2010 – 4 months
<p><b>Other research initiatives requested by CAREC committees and working groups: to be determined</b></p>	2010

**Table A5.3: Indicative Outreach Activities Workplan 2008-2010**

<b>Outreach Initiative</b>	<b>Milestones</b>	<b>Responsibility</b>	<b>Timeframe</b>
CAREC Institute portal	<ol style="list-style-type: none"> <li>1. Prepare scope of work and Terms of Reference (TOR).</li> <li>2. Contract with web site design firm.</li> <li>3. Design and launch of portal.</li> <li>4. Ongoing content development and maintenance.</li> </ol>	<ol style="list-style-type: none"> <li>1. CAREC Secretariat</li> <li>2. CAREC Secretariat</li> <li>3. Web site design firm</li> <li>4. Web site design firm and CAREC Institute</li> </ol>	<p>3 months, 2008 (design and launch)</p> <p>Ongoing content development and maintenance</p>
CAREC policy briefs	<ol style="list-style-type: none"> <li>1. Prepare scope of work and TOR.</li> <li>2. Contract with research institutions or individual researchers.</li> <li>3. Preparation of policy briefs.</li> <li>4. Dissemination of briefs.</li> <li>5. Quality evaluation.</li> </ol>	<ol style="list-style-type: none"> <li>1. CAREC Institute</li> <li>2. CAREC Institute</li> <li>3. Research institutions or individual researchers</li> <li>4. CAREC Institute</li> <li>5. CAREC Institute</li> </ol>	<p>Each brief approximately one month in preparation and finalization.</p> <p>Target minimum 3 briefs 2008, 5 in 2009, and 7 in 2010.</p>
Seminars and workshops	<ol style="list-style-type: none"> <li>1. Engage speakers/presenters.</li> <li>2. Facility arrangements and invitations.</li> <li>3. Hosting event.</li> </ol>	<ol style="list-style-type: none"> <li>1. CAREC Institute</li> <li>2. CAREC Institute</li> <li>3. CAREC Institute</li> </ol>	<p>2 events in 2008</p> <p>3 events in 2009</p> <p>4 events in 2010</p>