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# Pakistan Infrastructure Implementation Capacity Assessment (PIICA)

Discussion Paper Series:  
Technical Note 11

## FOCUS GROUP DISCUSSIONS

November 2007

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South Asia Sustainable  
Development Unit  
(SASSD)

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The discussion paper series were prepared as a part of the Pakistan Infrastructure Implementation Capacity Assessment (PIICA) study and comprise of the following technical notes.

Technical Note 1: Development of Construction Industry –A Literature Review

Technical Note 2: Local Stakeholders’ Perception Survey

Technical Note 3: Foreign Stakeholders’ Perception Survey

Technical Note 4: Business Environment and Cost of Doing Business

Technical Note 5: Purchase Price Review in the Infrastructure Industry

Technical Note 6: A Review of Allocations and Expenditures in the Public Sector

Technical Note 7: Demand – Supply Gap Analysis

Technical Note 8: International Case Studies – UAE, CHINA and MALAYSIA

Technical Note 9: Local Case Studies

Technical Note 10: Response to International and Local Bids

**Technical Note 11: Focus Group Discussions**

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## ABBREVIATIONS AND ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials	GIKU	Ghulam Ishaq Khan University of Science & Technology
ACI	Airports Council International	GoP	Government of Pakistan
ADB	Asian Development Bank	GoS	Government of Sindh
ADP	Annual Development Program	GoB	Government of Balochistan
AIT	Asian Institute of Technology (Bangkok, Thailand)	HR	Human Resource
APCCA	All Pakistan Construction & Contractors Association	HRDF	Human Resources Development Fund
BCA	Building and Construction Authority	ICB	International Competitive Bidding
CAA	Civil Aviation Authority	ICT	Information and Communications Technology
CAK	Contractors Association in Korea	IFC	International Finance Corporation
CAPECO	The Peruvian Chamber of Construction	ILO	International Labor Organization
CBR	Central Board of Revenue	IPC	Interim Payment Certificate
CDA	Capital Development Authority	JXB	Jebel Ali International Airport
CICA	Confederation of International Contractors' Association	KPT	Karachi Port Trust
CIDB	Construction Industry Development Board	KWSB	Karachi Water and Sewerage Board
CIJC	Construction Industry Joint Committee	L/C	Letter of Credit
CITC	Construction Industry Training Center	LCB	Local Competitive Bidding
CITI	Construction Industry Training Institute	LUMS	Lahore University of Management Sciences
COTI	Construction Official Training Institute	MBA	Master of Business Administration
CRS	Contractors' Registry System	MCA	Monopoly Control Authority
CWTC	Construction Workers Training Center	MIT	Massachusetts Institute of Technology
DBS	Development Bank of Singapore	MOC	Ministry of Construction (Korea)
DELFT	Delft University of Technology, Holland	MTDF	Medium Term Development Framework
DEWA	Dubai Electricity and Water Authority	NAB	National Accountability Bureau
DFCs	Development Finance Companies	NEPRA	National Electric Power Regulatory Authority
DIB	Dubai Islamic Bank	NESPAK	National Engineering Services Pakistan (Pvt.) Ltd.
DIFC	Dubai International Financial Center	NHA	National Highway Authority
DLC	Dubai Logistics City	NIT	Notice Inviting Tender
DURL	Dubai Rail Link	NLC	National Logistic Cell
EDR	Engineering Development Board	NPRP	National Procurement Reforms Program
ENR	Engineering News Record	NWFP	North-West Frontier Province
FBR	Federal Board of Revenue	OGRA	Oil & Gas Regulatory Authority
FBS	Federal Bureau of Statistics	P&D	Planning and Development
FIA	Federal Investigation Agency	PC-1	Planning Commission's Performa 1
FIDIC	International Federation of Consulting Engineers	PEC	Pakistan Engineering Council
FWO	Frontier Works Organization	PERT/CPM	Project Evaluation Review Technique/Critical Path Method
PIDs	Provincial Irrigation Departments	SOP	Security of Payment

PKR	Pakistan Rupee	SPO	Special Purpose Organization
PPP	Purchase Power Parity	SSGC	Sui Southern Gas Company
PPRA	Public Procurement Regulatory Authority	TEVTA	Technical Education and Vocational Training Authority
PSDP	Public Sector Development Program	ToR	Terms of Reference
PTA	Pakistan Telecommunication Authority	UAE	United Arab Emirates
RFP	Request for Proposal	USAID	United States Agency for International Development
RTA	Road & Transport Authority (Dubai)	WAPDA	Water and Power Development Authority
SECP	Security and Exchange Commission of Pakistan	WB	World Bank
SNGPL	Sui Northern Gas Pipelines Limited		

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# Technical Note 11 FOCUS GROUP DISCUSSIONS

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## **OBJECTIVES**

The Pakistan Infrastructure Implementation Capacity Assessment (PIICA) study was initiated in response to a specific request from the Government of Pakistan (GoP) to study the capacity of the local construction industry (client institutions, contractors and consultants) to deliver the planned infrastructure projects under the Medium Term Development Framework (MTDF). Such plans call for tripling the current public spending on infrastructure within five years.

The objectives of the focus group discussions were to:

- i) Ensure active participation and ownership of stakeholders in the study
- ii) Obtain concurrence on the framework for the study and the technical analyses to be carried out
- iii) Obtain feedback and comments on findings and develop consensus on the way forward

## **METHODOLOGY**

Consultations with stakeholders (federal and provincial government representatives and major clients, contractors and consultants) were an essential and integral part of the study methodology, and feedback was obtained at critical stages through focus group discussions.

A total of four focus group discussions were held throughout the study to maintain a high degree of ownership from the GoP and other stakeholders.

The first focus group discussion was held to identify and obtain consensus on issues and themes which should be researched in PIICA. The issues identified thus, formed the basis of developing a detailed questionnaire (see Annexure B, Technical Note 2, Stakeholders Perception Survey) which was implemented by Gallup Pakistan. It also provided guidance for the technical analyses which should be carried out at some stage.

The second focus group consisted of preliminary results of the literature review, stakeholder's survey and technical analyses, which were presented to representatives from the GoP, while findings and the way forward were discussed and written comments and suggestions solicited.

The third and fourth focus groups were held with consultants and contractors respectively to solicit their views and comments on the findings.

This technical note presents the compiled results of the four focus groups. List of participants is shown in Annexure I.

## **FOCUS GROUP DISCUSSIONS**

### **First Focus Group – February 7, 2006**

The first focus group meeting was held on February 7, 2006 at the World Bank (WB) office

in Islamabad. The participants included representatives from the federal government, major clients, contractor and consultants associations and other stakeholders.

Focus group discussions helped identify the broad thematic areas and the issues which should be researched. The participants overwhelmingly agreed that “*Yes, Pakistan has Capacity Constraints for Implementation of large Infrastructure,*” and that “*the four broad thematic areas to be evaluated are – Business Environment, Human Resources, Availability of Equipment and Availability of Materials.*”

The discussion provided a framework for preparation of a detailed questionnaire to be used for ascertaining stakeholders’ perceptions about the industry and to solicit their comments and suggestions. The focus group also identified the need for carrying out separate technical analyses and emphasized that case studies of various projects should be prepared. The topics discussed and issues identified within each broad thematic area are as follows.

### ***Business Environment & Regulatory Framework***

*“The business environment is the way it is because we are following the traditional ways of doing business – consultants/contractors/employers/executing agencies/auditors.” A participant*

#### ***Procurement***

- Procurement practice – pre-qualification/post qualification both should be used
- Differences in government and donor rules
- Inefficient contract administration (delayed payment and decisions)
- Preferential use of public companies and force account
- Lengthy dispute resolution mechanisms
- Discrimination between foreign and local contractors - preferential treatment is given to foreign contractors and consultants against local industry. Most participants said that there should be no discrimination, provided locals are competent (right to invite competence)
- In the absence of any consolidated data on the performance of contractors and consultants, same inefficient consultants and contractors repeatedly get work. Participants were of the view that there is no corporate structure within the industry as these are mostly family concerns. There is a lack of professional management. Participants proposed the ENR pattern of rating for consultants and contractors be introduced in Pakistan

#### ***Budgeting, Financing and Cost***

- Lack of financial facilities
- Delay in availability of funds – from finance to executing agencies
- Delay in payments. There is lack of work ethics and contractors should pay sub contractors on time. Client could manage these however it will bog them down; client should take action to penalize such contractors.
- Timely payments by clients are essential
- Delay in disbursements - executing agencies to contractors and consultants, and from contractors to sub-contractors/suppliers. There is a need for automation of processes.

- When PSDP is defined, a financial outlay is given but for every release a battle is fought. The PSPD should be divided by 4 and automatically released. Disbursement of finances should be organized.
- High cost of doing business.
- PSDP is not managed, roll-overs and throw forwards.

#### ***Administrative and Other Systematic Weaknesses***

- Weak institutions – quality of staff, lack of planning, poor execution & implementation capacity.
- Negative impact due to control and monitoring by NAB/FIA/audit.
- Competent management is needed within executing agencies and government. There is a lack of competence and decision making at all levels.
- Explicit support from the GoP for development of local industry and services is needed.
- The GoP should give appropriate signal to industry and to its own systems at all tiers - executing agencies should be supported by the parent ministry/ implementing agencies and their support machinery.
- A lack of autonomy to implementing institutions—trust and confidence, a clear demarcation between authority and responsibility – all should work in the laid down parameters, this will resolve a lot of problems
- Weak planning - absence of a master plan and a lack of coordination
- Need a stable trade policy and also there should be continuity of policies

#### ***Regulatory Framework***

- In trade policy and construction industry, there is no clear definition and policy to support development, hence an underdeveloped consulting and construction industry
- Weak regulatory framework is causing a lack of interest by international contractors
- A lack of facilitation for contractors and consultants
- High cost of doing business. There should be a uniform registration procedure
- Quarry raw material problems/royalties – federal and provincial regulations
- Role of audit – delayed audits and corruption. Audits should be concurrent and auditors should be held responsible for causing delays.
- Existence of numerous procedures for conducting business.

#### ***Country Perceptions - Corruption and Security Issues***

- Political interference -We should increase capacity by bringing in good people and government should take a bold decision of removing politically placed organizations/contractors that are not performing
- Audit is used as another tool for corruption
- High risk – law and order, political instability

#### ***Other Comments/Suggestions***

- Affordability and availability of transportation and logistics support for the industry
- Suggested case studies which the team may consider – motorway/port dredging (Karachi Port Trust/Port Qasim)/International Airport at Islamabad or Lahore

- Need to study processes involved in doing business
- Unit cost of output for infrastructure and for services should be looked at– is the price right in Pakistan?
- Has PPRA created a mess? Practice of acceptance of the lowest bid has deteriorated quality of inputs and causes poor quality

### ***Human Resources: Availability and Quality***

*“You don’t only have to see the future; you have to build the future” - A Participant*

#### ***Lack of Adequately Trained Personnel***

- Inadequately experienced and poorly qualified Human Resources (HR) at all levels and across all organizations. Engineers’ registration procedure should be more rigorous. On-the-job training is required to fulfill the present requirement and future demand for HR.
- Quality of education is poor. PE should be awarded only through professional examinations. Mid-career exams should be instituted. Institutions could be run in partnership between the public and private sector.
- Lack of data on manpower by category: engineers, skilled operators, tradesmen
- Wide gap between available skills, resources and demand. There is a need to evaluate the available resources and requirements for the immediate and short-term goals and a study should be conducted to determine this and estimate the gaps. The mid-term plan should be analyzed as; approximately 80,000 skilled staff is needed just for ERRRA housing development.

#### ***Lack of Skill Development Facilities***

- Skills development and training should be facilitated through public-private partnerships.
- A lack of in-house training
- A lack of statistical data on HR requirements severely affects HR planning. Better HR planning is needed at the highest level to facilitate timely and appropriate supply of HR to the industry
- Inadequate pace of HR generation
- All heads of departments (consultants/contractors/employers), should train the manpower already available to them.
- A lack of vocational skills development in the country –Technical Education and Vocational Training Authority (TEVTA) should be involved.
- Implementing agencies should help build the capacity of contractors/consultants employed by the agency.

#### ***High Employee Turnover***

- Resource drain: brain-drain in favor of developed countries
- Inadequate remuneration structures: need for optimizing price to attract adequately skilled people. This also leads to high employee turnover
- Cost of services has stagnated over the years and consequently quality has gone down
- Need to create a balance between training and retaining
- Influence of neighboring international markets

- High employee turnover – value addition is higher in Dubai/ Afghanistan – so there is a need to carry out a study and determine unit prices. Over 55,000 persons are employed in Kandahar/Afghanistan. Survey should cover employee’s service in a company over the last five years.

***Weak HR Management at the Client/Contractor/Consultant Level***

- Maintaining quality of output: Responsibility rests mostly with implementing agencies. The implementing agencies should initiate improvement by ensuring the quality of its own staff. Quality assurance must permeate at all levels. The PEC has a role to play in developing HR
- Contractors are running on “munshi” culture<sup>1</sup> with no professional management – they are not hiring trainee engineers and there are no formal training programs. Contractors should have training programs for staff. There is a lack of ownership from contractors. Each stakeholder has to realize the importance of their role. People will come back to Pakistan if the job environment is right.
- Qualified persons are not attracted to construction industry. The registration process for engineers should be more rigorous and they should be deployed only after adequate training.
- The pool of consultants and contractors is already limited. How can the companies be black-listed for poor performance? This is not the solution.
- Capacity has to be increased

***Other Comments and Suggestions***

- The WB needs to carry out a study – rationalize bid prices and have comparative costs for HR in regional countries.
- Possible case study – NHA experience from recent advertisements and hiring
- Engineers should be encouraged by inviting good fresh engineers to join

***Construction Equipment & Machinery***

*“Foreign contractors are allowed duty-free import of equipment – the same facility should be given to local contractors, if they don’t export the equipment after use, then they can pay duty and keep it. We should help in this. New machinery gives predictable Clause 14 plans. Old machinery has maintenance problems and performance issues.” - A Participant*

***Import Policies***

- Import policy needs to be liberalized - discrimination in import regulations for local and foreign contractors

***Financing Facilities***

- A lack of financial facilities for acquisition of machinery
- A lack of government support/intervention for enabling better credit facilities
- Absence of rental or leasing facilities

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<sup>1</sup> A traditional book keeper/accountant or foreman who does not necessarily have a technical background

- Construction industry not yet given a status of an “industry” – so no proper benefits are available for financing and leasing – policy and regulatory issue, prudential regulatory issues, credit lines
- Capacity to increase equipment resources is restricted due to a lack of facilitation.
- A special bank to support the construction industry should be created

#### ***Quality of Equipment***

- Predominant use of old machinery causes low productivity
- Good plant and equipment is more important than the money spent – encourage people to bring in machinery – special rules should be in place or ‘no questions asked’ policy can be implemented
- Repair and maintenance issues arise with old equipment

#### ***Others Suggestions & Comments***

- Representatives of State Bank of Pakistan (SBP), Federal Board of Revenue (FBR) should be consulted for the study

#### ***Materials (Cement, Steel, Bitumen, Fuel): Availability, Cost, Quality***

##### ***Availability of Materials***

- Ownership of quarries/ land by provinces – multiple regulations and taxes
- A lack of data on materials production (locally produced and imported) impacts project planning and execution
- Use of recycled materials – reduce quarry needs and bitumen
- Data on requirements and needs should be provided – annual data base of materials production
- Bitumen and steel are in short supply

##### ***Price Fluctuations***

- Collusion - ineffectiveness of the Monopoly Control Authority (MCA)
- Invite chief secretaries also as the quarries are a provincial matter and they are auctioning the quarries at their own will. Price is being increased four-fold which is causing a four-fold increase in the product cost
- Price escalation – existence of a cement cartel. Uncontrolled price hikes shows the ineffectiveness of the MCA. Although the capacity of the industry has increased but prices are still going up, absence of ethics in price escalation by manufacturers – no checks and balances either

##### ***Other Comments and Suggestions***

- A research and development facility is needed to acquire information on international best practices for alternate building materials
- Environmental issues – indiscriminate quarrying, destruction of Margalla Hills can be looked into – these are national and provincial issues
- Capacity building on the contractors’ side and raising awareness on the client side about alternatives to existing building materials is needed.



- Suggested study – need to assess materials requirements for ERRA and other executing agencies

## **Second Focus Group – May 8, 2006**

The second focus group discussion was held at the Planning Commission, Islamabad. Participants were federal and provincial government officials and representatives of the major executing agencies. Presentations were given by the WB team and Gallup Pakistan covering the following areas;

- Background and overview of the study
- First Focus group discussion– *Outcomes*
- Progress review
- Preliminary findings from
- Literature Review
- Public Expenditure Review
- Purchase Price Review
- Demand-Supply Gaps
- Project Case Studies, and
- Gallup Survey

The Perceptions Survey results and the technical analyses validated most of the issues which were identified as being constraints to efficient delivery of infrastructure within the four broad thematic areas, and that these constraints create barriers to growth of the construction industry.

### ***Panel Discussion and Guidance***

A panel discussion on the following key issues was held, with the focus being on Capacity Constraints- *How can we deliver?*

### ***Business Environment***

- Lack of financing and absence of reasonable credit facilities
- Cost of doing business
- Corruption and lack of transparency
- Security issues
- Regulatory framework (audit, NAB, PEC, lender rules, enlistment, contract documents, escalation, payment procedures)
- Client Capacity – delayed decisions, poor project management
- Procurement Procedures (Pre-qualification, awarding to the lowest bidders, insufficient rates, incorrect estimates)
- Political Interventions
- Dispute resolution procedures

### ***Human Resources Development***

- Shortage of adequately skilled personnel at all levels and amongst all stakeholders
- Lack of training and educational facilities
- Inadequate salaries and poor career paths result in brain-drain

### ***Construction Equipment & Machinery***

- Machinery is not available at the right price
- Spare parts are not available/poor maintenance
- Equipment is old, modern and advanced equipment is needed
- Financing and leasing facilities are not available
- Machine operators are not available
- High Taxes

### ***Materials***

- Cost of materials – inflation
- Transportation cost
- Demand-Supply gaps: bitumen, steel, cement
- Quality of materials
- Quarry regulations

Participants endorsed the constraints identified by the study in implementation of large infrastructure under the MTFD. All participants agreed that for implementing the proposed massive infrastructure program there would certainly be capacity issues faced by all the stakeholders (client, consultant and contractors).

One of the participants of the focus group highlighted the complexity of the issues as

*“What plagues Pakistan above all is a lack of respect for law. Despite presence of rules, these are not followed. Decision to cut-short systems and procedures for quick-fix solutions and ad hoc measures in the absence of a sound monitoring mechanism have produced a culture relying on uneducated, ad hoc and in a number of cases corrupt approaches to deal with development projects. The result is a non-professional output. Our capacity to undertake numerous projects particularly of large magnitude is, therefore, limited and needs to be supplemented.” - A participant*

Guidance was provided to the team to focus on generating solutions to the issues identified in terms of short-term and long-term measures which could assist the government in implementation of the MTFD.

### ***Government and Client Agencies Feedback***

Participants subsequently provided written comments and their proposed solutions to constraints faced in infrastructure delivery. The major issues which were addressed pertained to

weaknesses in the clients' own implementation, monitoring and organizational capacities, the business processes, and the need for improvement in procurement and contracts.

A common cross cutting theme emerged which related to HR development at all levels, whether in terms of clients' project management capacity, planning, programming, monitoring skills or the technical expertise of consultants' staff and professional project management capability of the contractors and quality of their technical staff.

The client agencies also recognized the need to;

- Use market based estimates for project costs
- Attract adequately skilled personnel by offering market based salary structures
- Ensure adequate project funding in budgets and timely release to the implementing agencies
- Facilitate purchase of equipment by contactors, and
- Provide institutional support to address credit, financing and leasing issues faced by the construction industry

The issues identified and suggestions made are summarized in Table 1.

**Table 1: Government and Client Agencies Suggestions**

Issues/Comments	Suggestions
<p><b>Contractors</b></p> <ul style="list-style-type: none"> <li>• Local contractors don't have the professional capacity</li> <li>• Inadequate response to recent tenders</li> <li>• Contractors are poorly equipped</li> <li>• Most contractors are tied up in small contracts, few large contractors</li> <li>• Cash flow, manpower and inadequate machinery are the major constraints</li> <li>• Contractors have inadequate capacity</li> <li>• Lack of institutions in the private sector to provide machinery to the contractors on rental basis</li> </ul>	<ul style="list-style-type: none"> <li>• Contractors should be encouraged to form joint ventures</li> <li>• Due to acute shortage of resourceful contractors; foreign contracting firms may be encouraged and facilitated.</li> <li>• The contractors should improve the terms and conditions of their employees and provide better facilities so as to retain them for longer periods.</li> <li>• The contractors may be extended better leasing facilities by the financial institutions.</li> <li>• To promote heavy engineering industry in the country, duty tariffs on local machinery may be reduced.</li> <li>• Contractors should make use of management tools and should also arrange regular training to their staff.</li> </ul>
<p><b>Consultancy Firms</b></p> <ul style="list-style-type: none"> <li>• Consultants are facing difficulty in hiring experienced engineers for construction supervision</li> <li>• Engineers are reluctant to work in remote areas due to ample opportunities available in more developed areas, cities and towns</li> <li>• Scarcity of skilled labor</li> <li>• Most of the consulting firms are involved in general services, and lack specialized expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Local Engineers may be given extensive field training and may be encouraged to join private sector.</li> <li>• In view of shortage of local consultants, induction of foreign consultants may be encouraged</li> <li>• Consultants need to improve service conditions of their employees to not only check brain-drain but to also attract overseas expertise</li> <li>• Joint ventures and consortiums be encouraged</li> <li>• Consultants are expected to engage highly qualified personnel besides imparting regular training to the staff.</li> </ul>

Issues/Comments	Suggestions
<p><b>Bureaucratic Business procedures &amp; Red Tape</b></p> <ul style="list-style-type: none"> <li>• Procedural delays are a great impediment</li> <li>• ADB Guidelines are general in nature and time consuming to comply with</li> <li>• Flow of funds is not in accordance with requirements of a project and expenditures; funds should be available on time; process should be automatic</li> <li>• Procedures for release of funds from federal to provinces cause delays and uncertainty</li> <li>• Procedures cause delay in payments to consultants and contractors</li> <li>• Cumbersome procedure for pre and post audit.</li> </ul>	<ul style="list-style-type: none"> <li>• Processes and procedures must be simplified and powers should be delegated to the lower strata of the organizations</li> <li>• There is a need to evaluate the overall financial and accounting system of the country</li> <li>• Introduction of commercial audit and internal system of audit will be useful to enhance process of implementation and avoid throw-forwards.</li> </ul>
<p><b>Client Capacity &amp; Training Requirements</b></p> <ul style="list-style-type: none"> <li>• Effective and efficient project management is needed for deliver of planned infrastructure</li> <li>• Capacity of line departments is limited in-terms of implementation, personnel management, information systems, financial and accounting management.</li> <li>• Capacity of line departments to evaluate output of the consulting firms is lacking</li> <li>• Coordination with other agencies is lacking during project implementation</li> <li>• Lack of incentives for departmental staff</li> </ul>	<ul style="list-style-type: none"> <li>• Before posting a Project Director, thorough inquiry and proper investigations should be conducted by the concerned department regarding his integrity and competence and that his earlier record of project execution had also remained excellent. Potential leadership to be appraised for timely completion of large projects.</li> <li>• For National projects, Planning Commission may maintain a list of reputed Project Managers, keeping in view their record of earlier executed projects both in terms of approved project cost and timely completion in consultation with provinces and executing agencies. These Project Managers be given preference when any new project is handled by organizations.</li> <li>• While increasing capacity of the departments would be imperative, it may perhaps not be appropriate to strengthen them indiscriminately. It may be desirable to outsource the responsibility of design and supervision of projects costing by more than Rs200 million. In strengthening the departments, R&amp;D section needs to be given preference and its capacity adequately enhanced.</li> <li>• To facilitate the Project Director, government may approve a special project allowance of handsome value so that he is free from monetary problems and can concentrate fully on project activities.</li> <li>• Strengthening of the management capacity of executing units both at federal level and in all the four provinces should be carried out for better results.</li> <li>• There is a need to strengthen capacity in planning of resources and monitoring the siphoning of resources</li> <li>• The planning &amp; monitoring services may also be performed by the consultant</li> </ul>

Issues/Comments	Suggestions
<ul style="list-style-type: none"> <li>Lack of Equipment and Facilities</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory environment for the control and standardization of the consultants and contractors professional practices should be strengthened</li> <li>To improve the technical capacity of the department and to ensure quality of engineering works, it is imperative to impart proper training and basic required knowledge to the fresh engineers as well as conduct short courses on specialized topics for senior engineers</li> <li>Special training program and improving terms and conditions of contract for project staff can enhance the project management capacity of the team.</li> <li>Use of project management techniques may be used more efficiently through the inclusion of well defined project control system.</li> <li>Monitoring and coordination should be through project management steering committees for overseeing the project implementation and timely completion of external dependency works such as shifting of services by various utility agencies</li> <li>Salary structure of project staff may be market based and incentives may be given for outstanding performance.</li> <li>Merit has to prevail at all levels</li> <li>Lab facilities need to be modernized and adequately upgraded. Standardization and testing equipment should be accorded duty free status.</li> </ul>
<p><b>Human Resource Development</b></p>	<ul style="list-style-type: none"> <li>Government may afford under-graduate/post graduate scholarships to the promising students in larger numbers to attract them to the profession and later in building a talented pool of highly qualified engineers, to be deployed on large infrastructure projects.</li> <li>PEC should enhance capacity to act as a body for professional development of engineers acting as consultants, executives and field managers through well established institutions and statutory mandates to bring them in line with international standards</li> </ul>
<p><b>Procurement and Contracts</b></p> <ul style="list-style-type: none"> <li>PEC standard consultancy and contract documents are not followed</li> </ul>	<ul style="list-style-type: none"> <li>Pakistan Engineering Council Consultancy and contract documents are quite comprehensive and approved by ECNEC and should be followed for project implementation by all forums/ organizations</li> <li>PEC needs to be more dynamic and effective, it should be further strengthened by enhancing its capacity to act as a professional body for a) updating of present regulatory mechanism to be</li> </ul>

Issues/Comments	Suggestions
<ul style="list-style-type: none"> <li>• Selection of Consultants and quality of services needs to be improved</li> <li>• Contractors quote low rates but they can not provide desired services.</li>   <li>• Award to the lowest bidder is considered mandatory</li>   <li>• Contractors must comply with all the basic requirements as per his enlistment both with Pakistan Engineering Council as well with the department.</li>   <li>• Schedule of rates is not workable, and escalation clauses are ineffective</li> </ul>	<p>consistent with international practices while catering for local conditions and needs b) streamline PEC bidding documents to facilitate procurement of engineering services and goods in accordance with best international practices c) to disseminate use of standard documents to stakeholders highlighting their benefits, and d) be in the loop of procurement for an effective and continuous feedback for updating bidding documents.</p> <ul style="list-style-type: none"> <li>• Ensure transparency and avoid award of consultancy services merely on the basis of the lowest bid</li> <li>• There is a need to have a balance between quality and cost of services. Quality based selection criteria should be developed for recruitment of consultants</li> <li>• A policy of 70:30 for technical and financial bid of the consultants may be imposed</li> <li>• There is a need to support and encourage the consulting firms to enter into provincial level work – Balochistan is a typical example where there is only one firm operating</li> <li>• Government Notification is required that award of contract should be through proper procedure and guidelines and that award to the lowest bidder is not necessary. The notification should have the approval of Auditor General of Pakistan and National Accountability Bureau (NAB)</li> <li>• Formulation of rules consistent with law of the land for timely dispute resolution mechanism for all engineering related procurement and execution.</li> <li>• Registration of contractors with Pakistan Engineering Council (PEC) requires further fine tuning of criteria and physical verification of the capacity of contractors.</li> <li>• Escalation clause is useful only if tender is based on market rate evaluation.</li> <li>• Schedule of rates may be done away with and Market Rate system be adopted as in the Punjab Province.</li> <li>• Incentives for early completion and quality work should be extended to the contractors.</li> <li>• The contractor may be allowed mobilization advance free of interest and price variations facilitated, where required</li> </ul>
<p><b>General Working Environment:</b></p> <ul style="list-style-type: none"> <li>• Poor law and order situation in the country especially in Balochistan</li> <li>• Local Irritants (Tribal Sardars/Waderas)</li> </ul>	<ul style="list-style-type: none"> <li>• Needs to be improved</li> </ul>
<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Markets are not stable, and quality varies</li> </ul>	<ul style="list-style-type: none"> <li>• Dedicated quarries (as in Punjab C&amp;W)</li> </ul>

Issues/Comments	Suggestions
	<p>Department for Lahore Ring Road) may be established to stabilize the market for procurement of aggregates and to curb monopolization trends.</p> <ul style="list-style-type: none"> <li>• Use of bitumen produced from Arabian crude oil needs to be encouraged because of its inherent uniform and better quality</li> <li>• Bitumen import from Middle East may also be allowed to meet the short fall and to check monopoly.</li> </ul>

### Third Focus Group - May 23, 2006

The third focus group was held at the WB, Islamabad office with stakeholders from consulting firms. Preliminary findings of the study were presented and participants asked to propose solutions which could address the issue of capacity constraints. The focus group discussion provided insights on the problems faced by the industry and possible solutions to overcome the prevailing constraints.

#### *Panel Discussions and Guidance*

*“In this day and age, if we don't like to "change" and rise to the emerging trends and challenges, then we expose our self to becoming "irrelevant". This is true in consultancy as well, but it is not irrelevant to the client either. Lack of policy and vision to support our own institutions has resulted in a lack of capacity. So much so that we are sitting here and pondering over whether or not, Pakistan has the capacity to handle its own large infrastructure projects”*

*-A participant*

Basic questions framed for consideration by participants included:

- a. Do we have the capacity to efficiently handle projects of any size?
- b. Did we ever have the capacity? If we did, what went wrong?
- c. Are the projects that are handled by the "expatriate" experts, doing any better? If not, then should we deduce that the problem is in the system?
- d. Has the capacity somehow been reduced at the "Owner" side as well to take work from the consultants?
- e. Have we provided a "level playing field" and equal opportunities for all consultants?
- f. At the policy level, does the system support capacity building or is responsible for capacity reduction?

The bottom line being, can we deliver the planned infrastructure under the MTRF, and how can we increase capacity?

Some of the impediments to the growth of capacity of domestic consultants for large or even small infrastructure projects and possible solutions were identified as:

### ***Procurement Practices and Policies Limit Capacity***

*Considering the intellectual inputs in consultancy, procurement based on the lowest price, has vastly impaired the growth of the industry.* Consultants should be engaged on the basis of "technical appropriateness" and not on the basis of the "lowest bidder" criterion. Least cost procedures must be discouraged as these have led to problems that are being faced today by the industry. The fundamental flaw being that the client does not know how to estimate project costs, and requirements. Furthermore, local consultants do not work out their costs nor determine what the correct bid price should be. Bids are priced just to qualify for the award of contract. In other countries, the lowest cost methods do allow for profits to be made, whereas, in Pakistan the lowest cost method causes losses.

*The "lowest evaluated bid" should be the criteria for both consultants and contractors.* Public Procurement Regulatory Authority rules recommend award on the basis of the lowest evaluated bid. These rules are currently applicable to the federal procurement and should be extended at the provincial level also.

*Criteria are not consistent* for the selection of consultants/contractors. Guidelines given by PEC are not followed and major employers like WAPDA and NHA all adopt different practices and no uniform criteria is used for selection of consultants. There are often variations in criteria even within one department.

*In Quality, or Quality and Cost based selection, no negotiations should be held with the technically number one ranked firm.* The client agencies try to bring cost down to the PC-I provisional costs or even to that of the lowest bidder costs citing potential audit objections. Problems are compounded because clients form very low and unrealistic estimates for consultancy services to begin with. While evaluating proposals, unreasonably low costs offered by consultants should be rejected. The WB guidelines for engaging consultants are very clear and they should be adopted at the federal and provincial levels for all projects.

Role of PEC as a regulatory and professional body should be made more effective and enforcement of PEC contract documents through out the country in all government departments and for all future contracts should be ensured. The ongoing contracts should also be amended to conform to PEC approved CoCs.

*Special conditions of contract which change the spirit of the contract should not be allowed,* for example, it is a common practice to delete clauses in consultancy contracts which provide compensation for delayed payments made by clients.

*Pre-qualification procedures are flawed* as different categories of consultants are merged for bidding and hence the spirit of the "lowest bidder" procurement is kept alive. For example, quite often, large established firms are made to compete with much smaller firms with the result that with an un-matching overhead and organizational expenditure, one of the following can happen.

- a. Either the quotes from large consultants are very low to compete with the smaller firm, and in the process sacrifice all its procedures, systems and quality controls to win the job and subsequently struggles to perform; or
- b. Smaller consultants get the job at higher rates than justified by their overheads, and then start to appoint people from other firms to deliver the job



Such practices which allow larger firms to compete with smaller firms simply result in an unequal playing field; this becomes a fight for survival for the larger firms and ultimately the employees of these firms suffer. In essence, without intention, the government tends to undermine the consulting institutions created over a period of time, and in effect adversely impact the growth of the industry. Encouraging healthy competition within all categories of consultants, for new entrants as well as established institutions, in the private sector is very important.

*Some clients have started engaging individuals as “the engineer” (i.e., individual engineers not belonging to any consulting firm) which is against the spirit of FIDIC contracts as role of the supervisory consulting firm is undermined. There is no transparency maintained in such appointments and this practice should be discarded.*

*Policies for the industry should be the same as for export oriented service sectors; such as the software industry which has tax incentives for export of services.*

### ***Lack of Institutional Support***

*Policies and procedures should support the institutional strengthening of the consultants.* There are several consultants, who are in this business for decades. The government must evaluate the institutional strength of the consultants, such as their standardization of procedures, their experience to create systems and knowledge-based institutions and hence to improve their capacity to respond and deploy resources, their capacity to transfer technology, capacity to invest in their organizations and to keep updated their most precious asset i.e. human resource.

Unfortunately, the private sector entrepreneurs and investors have never been the driving force in Pakistan, especially in large infrastructure projects which fall in the exclusive domain of the government. Therefore, the government has to make a policy to promote the institutions which have been created in Pakistan so that they strengthen themselves and eventually are able to export services, rather than lose their HR to foreign consultants. At present, Pakistani firms actually end up supporting the institutional strength of these foreign organizations, which in turn cost Pakistan's tax payers more, as the same local HR cost twice or thrice more when they are deployed through international consultants on the same projects.

The net result to the industry is that:

- a) Only few Pakistani consultants have any capacity to compete in the international market. They get international projects either as sub consultants, or even "sub" to the sub-consultants, or are mere man-power providers; or
- b) Obtain assignments only in either GoP sponsored/financed projects, or are given jobs directly at the request of GoP, which is the peculiar case of public sector consulting organizations, is supported by GoP.

Valuing the private sector institutions and strengthening them are important in building capacity.

### ***Public Sector/Parastatal Organizations***

*The government should consider creating a level playing field by providing equal opportunities for both public and private sector firms.* There are a significant number of public sector consultants, employed by the government. The usual practice is that the government awards work to them without any competition - against the regulations of PEC. There are many

disadvantages to this practice some of these are;

- Deprivation of the private sector consultants to participate in many "large infrastructure projects", resulting in non-development of the capacity that we are pondering today.
- These procurements have been non competitive and cost more to public exchequer.
- Disparity and "uneven playing fields" in the consultancy environment.

Lack of capacity development for consultants to provide them with a basis to export in the domain in which they have gained experience.

### ***Corruption and Lack of Transparency***

*There is a consensus about corruption being endemic and general lack of transparency. In order to curb corrupt practices and corruption the following recommendations are made;*

- Discourage and discontinue single source contracting to eliminate corruption
- Prior to award of contract, evaluation reports should be made public and open to scrutiny
- Clients delay payments to extract money, procedures should be modified to ensure timely release of payments
- Supervision powers of consultants should not be modified by the client so that "prior approval" is obtained, as this leads to opening channels for corruption
- Lender agencies should hold meetings with consultants/contractors on a semi-annual basis to gain insight on transparency issues but it is up to the stakeholders to improve their image
- Corruption may be minimized by effecting transparency in the processes of pre-qualification, evaluation, award, approval and payment. Corruption is normally reduced by introduction of Project Management Consultants. Introduction of standard contract formats to be signed by all the concerned parties (contractor, consultant and client – whichever applicable) may help to further reduce the corruption at all stages. Period fixed for release of payment by client is also a source of corruption. As evidenced from the Gallup Survey results and also in the opinion of contractors, they indulge in the use of unfair means to get their bills released earlier than the fixed period of 28 days or as stipulated in the condition of contracts.
- In previous mega projects for example, the Tarbela Dam and Indus Basin projects, a Project Management Consultant was the client's general consultant who had all powers; and the project consultants were a separate team. The PMC and project consultants should not be the same firms. This project arrangement showed that when client power is at a minimum then corruption is minimized. Prevailing practice is that authority of the engineer is taken away in essence. This should not be the case if we want to eliminate corruption. PMC firms are specialist firms and not general consultants. A proper PMC firm alone costs 5 to 6 percent, and the government must recognize the need for such consultants to be brought on board if they want to meet their infrastructure development goals.

### ***Clients Lack Capacity***

Client department staff, especially project staff, should be paid well and specialists should be engaged for the projects at competent salaries. But the question remains that do morals improve as economic conditions improve? This is debatable. Issues with clients are not just about money but are also related to their capacity to think; it's a systematic issue. Increasing the client staffing levels and organizational size is not the solution; instead *functions should be out-sourced*.

### ***Barriers to Human Resources Development for the Industry***

*The issues of low rates and corruption which are damaging the infrastructure consultancy profession have to be addressed quickly.* Construction industry consultants charge rates and pays should be competitive with professionals in other sectors. For example, the oil sector is paying fresh engineers having only two years experience salaries up to Rs100,000 per month and offer a much better working environment.

*The consulting industry is plagued with poor salary structure which results in inadequate remunerations being offered.* Salaries for junior engineers at Rs15,000 to 25,000 and senior engineers at Rs60,000 to 100,000 per month are far too low. Regular graduates in the banking sector get over Rs20,000 as a starting salary whereas, fresh engineers get only Rs5,000. Similarly in IT companies, fresh engineers are getting paid over Rs35,000 per month. Salary rates of engineers have to be increased in order to attract people back to the engineering profession.

*There is a considerable shortage of adequately skilled personnel.* Even a junior engineer is not available in the market; the good ones are going to the telecom sector or other sectors, whereas, for construction industry only third rate engineers are left. Top students are not joining the engineering profession because of the prevailing low rates and poor work environment. Even to this day, the professional compensation in the engineering field is the lowest among other professionals such as IT, telecom, administration and accounting.

During the past five years, there was so much demand for IT and lure of "H1 (USA) visas" that most of the talent has ended up in the IT sector, so much so that a number of engineers changed their profession and went into IT instead. However, anyone leaving IT went into business administration (MBA) instead. Engineering has become the least priority as a career choice resulting in a significant decline in numbers of graduating professionals and number of enrolments in engineering universities. *The loss of top students together with deterioration in quality of education has weakened the pool of engineering HR.*

*Government must recognize that consultancy costs should be 5 to 10 percent of project costs if they want the industry to survive,* bring up the quality of services and increase the number of consultancy firms. The profession must be made attractive enough for new entrants.

*Clearly, the market is not correcting itself fast enough.* The situation has developed due to low volume of work in the past when there was a slump in the industry and low charge rates and unemployment prevailed. Now with an upswing in the demand within the country and in regional countries, there is a shortage of adequately trained engineers and technicians. Older, ongoing contracts are especially suffering due to unattractive charge rates and salaries for all professionals – engineers and technicians. This is especially true for remote sites in risky and inhospitable environments. Demand side intervention is needed (increased charge rates) to allow engaging properly qualified personnel. However, another challenge is that such persons are not available in the market as most have either gone overseas or employed in cities or simply have changed profession.

*Shortage and quality of HR is a problem that can only be addressed over the long term.* Standard of engineering schools and technical institutes in the country is very poor and these produce engineers and technical staff with very low competence and with inadequate set of skills. Capacity building and expansion of universities and technical institutes has to be supported by the government along with developing quality standards as a priority. For example, at present a fresh engineering graduate from Jamshoro University, Sindh with 90 percent marks is far worse than an

engineer from the NED University of Engineering and Technology, Karachi with only 60 percent marks. It is recommended that standardized testing should be adopted in the universities.

*A mechanism to reverse the brain-drain has to be found.* One solution could be that if a professional is a Pakistani passport holder without foreign experience then he can be paid local competitive rates (equivalent to market charge rates and salary in Pakistan) whereas, for Pakistani professionals with foreign experience international charge rates and salaries (comparable to regional markets and the UAE) should be offered. Similarly, if a professional is of Pakistani origin but holds a foreign passport then expatriate charge rates and salaries should be provided. Pays should be as per job description, requirements and equated with \$PPP.

*Measures have to be taken to arrest the exodus to the Middle East.* It is imperative that salaries of mid level and senior professionals have to be revised along with professional fees of the consultants and brought at par with the general level in the region to reverse brain-drain. Indeed a large number of professionals would like to return if they are offered attractive salaries. Such measures should go a long way in attracting qualified personnel back to the industry.

*Restructuring charge rates and pay packages however will not solve all the problems.* There is a dire need to enlarge the pool by training the fresh graduates. Engineers having 3 to 5 years training are needed, but currently as soon as young professionals gain few years experience, they either move to other job opportunities in various sectors or move overseas. Career path options in the industry for professionals are very limited which also contributes to a high turnover.

*The government has to focus on offering incentives for training.* Consulting associations are not organized enough or strong enough to bring about required changes in the sector. The rates quoted or offered by clients preclude required investments for training and staff development; therefore, the government should allocate a certain percentage of the budget for training of engineers whether on projects or through short courses and also facilitate such training. It is suggested that contractors and consultants should be encouraged to create training cells in their organizations to induct personnel from technical schools and train them as technical staff to a common level of training.

### ***Other Measures for Improving Capacity***

Some other measures proposed to enhance capacity of the industry are;

- *CoC for contractors should have incentives for procuring machinery.* Terms should be such that contractors are able to import required equipment and are facilitated by the client. The equipment can be the property of the client until advances or financing are recovered.
- *For specialized plants, government should facilitate temporary import of machinery* with reasonable safeguards for their re-export.
- *Necessary polices should be devised to encourage restructuring of construction firms.* Contractors should have professional management and should also be encouraged to institutionalize their organizational structure with professional engineers on their board of directors.
- *Management of consulting firms should be strengthened* and improved to increase efficiency.
- *Sustained PSDP growth is essential* to create sustained opportunities for professional development.
- *Dichotomy in charge rates has to be removed.* It is commonly seen that the government hires their individual consultants at good market rates while charge rates offered to the consulting

companies are comparatively lower, such dichotomy has to be removed.

### ***Do we have the Capacity to Deliver***

*Large projects like motorways, long span bridges need a higher degree of project management skill than what is available at present.* The reputed and well established foreign contractors (not questionable names) will take the projects on the terms and prices compatible with the complexity of the project which they can assess from their experience. They will plan the project execution and induct suitable equipment in good working condition to ensure timely delivery.

*Poor response from foreign contractors/consultants is likely because the foreign companies cannot quote a competitive price when local firms are in the competition.* In all cases of projects where foreign and local consultants compete on equal terms, the local consultant wins the project on the basis of competitive fee. Procurement policies will have to be revised to create interest in foreign firms.

*Foreign consulting firms can have a negative effect if adequate fees are not provided for the local consultants.* Foreign consultants get projects at high fees which a local consultant never gets. When a foreign consultant is engaged they set up a local office where local engineering staff is employed at more than twice the prevalent salaries. This financially weakens the local consultant further. Recently, a number of foreign consultants have opened back-offices in Pakistan to engineer their projects in the Gulf and other countries and employ engineering staff at salaries which the local consultants can not afford to pay. Therefore, in the case of local consultants, fee should be enough to enable them not only to engage the best engineering staff but also to stem the exodus of the engineers which are trained and experienced by these very local consultants. The local consultants should be able to pay them the comparable salaries so that they do not see greener pastures abroad or with the foreign firms having offices in Pakistan. Another advantage will be that the local consultants should be able to engage specialists from abroad for fields of expertise not available locally.

*One solution to improve chances of delivering the planned MTRDF infrastructure projects may be by engaging Project Management Consultants (PMCs) who should manage the entire process.* For this to happen foreign professionals and firms must be allowed to come in and they must be facilitated through all the cumbersome procedures. However, there are regulatory problems to bringing on board foreign firms and such regulations need to be changed.

*Foreign workers, professionals and firms will have to come in but they charge a premium.* Some foreign professionals however do not see a career growth and are often not dedicated or motivated to come in. Suitable incentives have to be offered to attract good international staff and firms. If foreign professionals come in it would also be beneficial as interaction with them will increase local capabilities.

*Appropriate rates, prompt payments and financing facilities on better terms are needed for the local consultancy industry to grow.* PEC has issued standard contract documents for consultants. These specify a revolving fund to cover the cost of services for a period of three months, but clients give this facility only against a bank guarantee, so in effect consultants are unable to use this facility given the 100 percent collateral required by banks. To add to this, payments to consultants are often delayed by several months and no compensation is made for

such delays. *The low fees to start with and delays in clearing invoices create insurmountable major barriers for new entrants to the industry and for the existing firms to enhance capacity by investing in new technology and training.*

*Addressing the issues of shortage of adequately skilled HR and reversing the brain-drain through demand side interventions, restructuring consultancy fees, expanding the available universities and technical training institutes and improving their quality, instituting training programs, improving transparency in procurement and client capacity to manage projects are all critical measures required to increase local capacity.*

#### **Fourth Focus Group – May 23, 2006**

The fourth focus group discussions were held with representatives from construction firms and the All Pakistan Contractors Association. A presentation of the findings in the assessment study to date was followed by a panel discussion. Stakeholders provided their views on constraints faced by the construction industry and the measures needed which could help deliver the infrastructure planned under the MTFD.

#### ***Constraints Faced by the Construction Industry***

##### ***Lack of Financing***

*Banking industry has declared construction to be high risk as assets are moveable. This should not be the case. Special prudential regulations should be made for the construction industry. Banks require 100 percent cash margin or a combination in the form of a partial cash margin with the balance covered by 200 percent property in the form of collateral in order to provide any facility. Special directives are needed from State Bank of Pakistan (SBP) to allocate a certain percentage of the lending portfolio for the construction sector. Financing for equipment, BOT, BOO, BOOT projects is not successful because the banking sector does not understand the construction industry. The certified bills should be acceptable at a discount to the banks as collateral. Role model of Construction Industry Development Board (CIDB) of Malaysia should be followed which facilitates the industry.*

The SBP has to take the lead and commercial banks should be allowed to carry out their own risk management. However, the constraint is that banks do not have the expertise to handle the construction industry. Solutions should be discussed with the banks to address risk assessment issues and the banking industry should be provided technical assistance to cater for the construction industry. In 1992, a government report on construction industry addressed a number of issues, but recommendations were not implemented.

##### ***Cost of Doing Business***

*The industry is plagued by poor item rates (schedule rates) and with the added burden of uncompensated expenses on gratis items such as maintenance of vehicles, offices, etc., which are not covered under the Bill of Quantities (BoQ). Corruption costs are very high at approximately 20 percent in some departments.*

*There are multiple taxes, fees and levies such as registration, withholding and professional taxes, levies and contributions such as education cess, Employees Old Age Benefit Insurance (EOBI), social security, professional tax, labor tax, cost of various insurances, cost of*

performance, bid bonds, and bank guarantees among others. In addition there are other costs such as documentation preparation costs, costs of obtaining tender documents, maintaining of engineering staff, and costs of multiple enlistments. At every department a deposit of approximately Rs1 million is needed and for a large contractor cost of enlistment alone can be as high as Rs50 million per year. All these costs along with common delays in interim payments, and release of retention monies, create cash flow problems. The cost estimates and schedule of rates provide for only 20 to 25 percent of the contract price as profits and overheads, which clearly cannot cover the costs.

*Double taxation is made under prevailing rules.* Withholding tax is deducted first from the main contractor and then again for payments made to sub contractors. Withholding tax at 3 percent is required to be deducted from suppliers, but in the industry this is not practically possible as most construction material suppliers are a part of the undocumented part of the economy. This is an added cost to the contractor.

*Presumptive taxes should be eliminated.* Corporate tax rate worldwide is about 35 percent on net profit and refunds are given in case of losses, but this is not possible in Pakistan. In case of proprietorship firms, the withholding taxes are the final liability, but private limited and registered firms have to file returns.

#### ***Procurement, Corruption and Lack of Transparency Issues***

*Parastatal firms such as NLC and FWO are directly given favorable contracts,* but for private sector contractors, prices are negotiated to below estimated costs.

*Contracts are one-sided and therefore client has an opportunity to extort.* All contracts should be FIDIC based. However, even the FIDIC standard conditions of contract have been mutilated. Contractors are being penalized through contracts but are denied any rights stipulated in it. Some clients such as WAPDA and NHA follow FIDIC to some extent, however other departments do not. There are often no compensatory clauses and contractors assume all risks. Although PEC has notified the use of standard documents, these are not being implemented in letter and spirit. The federal government has to establish their writ otherwise there can be no improvement.

*Greatest vulnerability to extortion is at the time of award of contract.* If a client follows FIDIC contract guidelines than there is less room for corruption but with other forms of contract documents, corruption is higher which increases cost and negatively impacts the quality of work.

*Corruption may be decreased by increasing pay of civil servants;* project staff should be well compensated at private sector rates. For example in the Lahore Ring Road project, the Superintending Engineer, Executive Engineer and Sub Divisional Officers have been appointed at salaries ranging from Rs200,000 to 25,000 per month. This is the right approach and commissions have been reduced.

#### ***Lack of Training and Educational Facilities***

In view of the shortage of skilled technical staff, private public partnership was considered necessary to revamp the 400 or so vocational training institutes in order to develop capacity and provide the required pool of skilled personnel. The ADB/WB should play a role in developing HR.

### ***Proposed Measures for Enhancing the Capacity of Local Contractors***

It was observed by stakeholders that the projects which are delayed or go in default are generally due to the of lack of sufficient financial capacity of the contractor and his ability to absorb adverse shocks.

These shocks may be due to late payment of running bills, non-availability of credit from banks, late release of retention monies, non-payment of additional and varied work, late or non payment of price escalation bills, delay in payment of compensation claims, insufficient amount of running bills due to low priced contracts, poor business environments (additional undocumented overheads), high operational costs, late decisions by clients, slow release of allocations, biased and unfavorable contract conditions, high cost of doing business, numerous fees for renewal of licensing/enlistment, non availability of materials from suppliers on credit, and recovery of income tax on much higher rates. All these shocks were considered to have a profound effect on the financial capacity of the contractor.

If the contractors are strong or made financially strong through appropriate contractual provisions, they not only can steer through the current contracts without default, but also increase their capacity to handle bigger contracts.

A consensus amongst contractors was that the key to increase capacity is to enhance the financial strength through measures which specifically address the related contractual impediments. Stakeholders were optimistic that the current capacity of the industry could be doubled if the following measures are taken:

#### ***Facilitating Mobilization Advance***

The Mobilization advance should be free of interest. NHA, WAPDA and some federal agencies are not charging any interest on this advance, but provincial government departments charge a 10 percent interest.

Often recovery of mobilization advance starts from the first running bill, for example the provincial government (Punjab) recovers the amount in first seven running bills irrespective of the duration of contracts which are normally more than 12 months. This severely affects cash flow. The solution would be to start recovery of mobilization advance when 50 percent work is completed.

The mobilization advance should be enhanced from 10 percent to 25 percent of the contract value. NHA has recently started giving 25 percent mobilization advance with the following breakup.

- i). 5 percent advance against a bank guarantee
- ii). 10 percent advance for the purchase of equipment without any bank guarantee or 5 percent additional cash advance against a bank guarantee, if the contractor does not require advance for purchase of equipment
- iii). 10 percent advance through operation of an escrow account.

This innovative model of NHA should be adopted by other clients of federal and provincial governments as it resolves a major constraint faced by the industry.

#### ***Amendment in Clauses for Deduction and Release of Retention Money***

Generally all clients deduct 5 percent retention from each running bill. APCA proposed



that deduction of retention money should be split up with 2.5 percent of the bill amount retained from each running bill and the balance amount due to be retained should be provided in the form of a bank guarantee. On the substantial completion of work, 90 percent of retention money (50 percent cash and 40 percent bank guarantee) should be released. The contractor would be required to extend the bank guarantee for the remaining 10 percent retention till the end of the contractual maintenance period. The proposed method would allow better cash flow for the contractors and not tie up monies till the end of the contractual maintenance period.

#### ***Enhancement of Allowable Secured Advance***

The contractors are currently paid secured advance equal to 75 percent of the value of materials stockpiled at site. Contractors proposed that this percentage should be enhanced to 90 percent in order to facilitate cash flow in the project and that cement and sand should also be included in the list of eligible materials. The contractor is responsible for pilferages or loss and damage to such materials and hence the client is fully secured from any loss.

#### ***Payment under Price Variation Clause***

##### ***Bricks and Stone Aggregates***

All materials which contribute 5 percent and above individually to a project should be included in price variation clause. Bricks in case of buildings and stone aggregates/boulders in case of road and drainage works are consumed in large quantities and any variation in their prices has a negative effect on total value of contract. Hence, these materials should be included in the price variation clause of contracts.

##### ***Diesel and Labor***

Diesel and labor should be part of price variation clauses in all contracts. In current contracts of provincial governments, labor is not part of a price variation clause. Although diesel has been recently included, it is taken as only 5 percent of the contract price which is quite inadequate. The component of labor should be 25 percent in building contracts, 15 percent in road and drainage contracts, and the diesel component for road work should be taken as 20 percent of contract value for consumption of diesel on-site operations and it can be as high as 40 percent for transportation of materials. Correct impact of diesel and labor on item rates should be determined and fully compensated under the contract.

##### ***General inflation***

There is no provision for payment of price escalation due to general inflation. General inflation which has been close to double digits in recent years adversely affects contractor's overheads. Inflation effects staff salaries, boarding and lodging of staff, watch and ward, workers uniform/clothing, management cost, maintenance of site office/head office, contingencies, indirect labor among other items, which together have a cost component equal to 10 percent of the project cost. Effect of annual inflation should be calculated on 10 percent of the project cost component and should be paid to the contractor under the price variation clause.

#### ***Advance Payment to Contractors on the Basis of Progress***

In the Public Works Department (PWD) account code there was a provision of an "advance payment" which the Engineer in-charge could make on the basis of progress reports without recording detailed measurements. This was an advance payment allowed between two monthly running bills. If the contractor has produced say 100 units of work since the last running bill, the engineer in-charge could make payment for 70 units (say 70 percent). If a contractor is given such "advance payment" in the middle of the month, say a fortnight after the last running

bill, this will provide great financial support to the contractor and enhance his capacity. This practice of making advance payment was introduced during the time of the British Empire and remained in-vogue for some years even after independence. This should be revived to enhance the capacity of the contractor to enable him to handle larger contracts.

### ***Amount and Form of Bid Bonds***

Provincial governments do not accept a bank guarantee for bid bonds even for Mega Projects. It is a big financial drain for a contractor to arrange cash and provide deposit-at-call for bid bonds of large projects. This is discouraging the competition in bidding. All clients should accept the bank guarantee as well for bid bonds and the amount of bid bond should be reduced to 1 percent of the bid price.

### ***Revised Contract Conditions***

Stakeholders suggested that proposals to improve cash flow should be made part of “PEC standard contract documents.” PEC standard documents are equitable and not wholly biased in favor of the client; these should be made mandatory for use by all clients.

## **CONCLUSIONS**

The focus group discussions validated the results obtained from the Perceptions Surveys and the technical analyses and the stakeholders concurred with the complex issues and challenges faced by the construction industry.

In terms of the capacity of stakeholders to deliver the planned infrastructure under the MTFD, generally a lack of confidence within clients, contractors and consultants existed.

While valuable suggestions were provided in the focus group discussions which can remove a number of constraints faced by the industry, there were no solutions offered which could be implemented to provide increased capacity over the short-term as the systematic weaknesses in the business environment, the lack of adequately skilled HR, lack of client agencies capacity, lack of financing and credit available to the industry and other constraints cannot be addressed within an immediate or short-term time frame.

However, resolving such issues is critical for enhancing local capacity and strengthening the industry. The lead has to be provided by the government through appropriate demand side interventions. A long-term commitment by the government for sustained construction industry development by means of pursuing policies which address the specific needs of the industry and promote growth is essential.

Clearly, besides taking measures to develop the local construction industry, innovative methods of procurement and delivery mechanisms will need to be thought of in order to meet all of the MTFD infrastructure development goals.

## **Annexure I: Focus Group Participants**

### **First Focus Group Participants - February 7, 2006**

Dr. M. Akram Sheikh, Deputy Chairman, Planning Commission  
Lt. Gen. Mohammad Zubair, Chairman, ERRA  
Riaz Ahmad Khan, Special Secretary, Ministry of Water & Power  
Maj. Gen. Farrukh Javed, Chairman, National Highway Authority  
Tariq Hameed, Chairman, WAPDA  
Farooq Chaudhry, Port Consultant  
AVM Mohammad Safdar Khan, Acting Director General, Civil Aviation Authority  
A.G.Usmani, Chairman, APCA  
Tauqir Sultan Awan, Zonal Head, APCA  
Sabir P. Chohan, Ex-MD, NESPAK  
Shahid Beg, Managing Director, Railcop  
Sarfraz Ahmed, Managing Director, Progressive Engineering  
S.U. Qureshi, Hitech Engineering  
Ahsan Siddiqui, Engineering Associates  
Zaheer Mirza, Chairman, ECIL  
Brig. (Rtd.) Aftab Ahmad Siddiqui, CEO, Infrastructure Development (Pvt.) Ltd.  
Manzoor Rehman, Sr. Project Implementation Specialist Infrastructure, ADB  
Anjum Ahmad, Sr. PSO Specialist, WB  
Isfandyar Khan, PSO Specialist, WB  
Simon Thomas, Transport, WB  
Hiam Abbas, Transport, WB  
C. Rastogi, Transport, WB  
Hasan Zaidi, Transport, WB  
Fatima Idrees, Gallup Pakistan  
Uzma Sadaf, Procurement Specialist, WB  
Khalid Khan, Gallup Pakistan  
Jamshed Khan, Gallup Pakistan

### **Second Focus Group Participants, Government & Private Sector - May 8, 2006**

Dr. Akram Sheikh, Deputy Chairman Planning Commission  
Dr. Asad Shah, Member Planning, Planning Commission  
Lt. Gen. Mohammad Zubair, Head of Infrastructure Management Unit (IMU), Planning Commission  
Lt. Gen. Nadeem Ahmed, Deputy Chairman, Earthquake Reconstruction and Rehabilitation Authority (ERRA)  
Tariq Hamid, Chairman, WAPDA  
Gen. Mehboob ul Muzaffar, Registrar, Pakistan Engineering Council  
Maj. Gen. Farrukh Javed, Chairman, National Highway Authority  
AVM Pervez Nawaz, DG, Civil Aviation Authority, CAA  
AVM Mohammad Safdar Khan, Deputy DG, Civil Aviation Authority (CAA)  
Riaz Ahmad Khan, Special Secretary, Ministry of Water & Power  
Eng. Ahmed Ghazal Usmani, Chairman, All Pakistan Contractors Association (APCA)  
Tauqir S. Awan, Zonal Head, All Pakistan Contractors Association (APCA)  
Zaheer Mirza, President, Engineering Consultants International (Pvt) Ltd. (ECIL)  
Brig. (Retd) Aftab Ahmad Siddiqui, CEO Infrastructure Development Consulting Company

Ahsan Siddiqui , Deputy Managing Director, Engineering Associates (EA)  
 Sabir P. Chohan, Ex Managing Director NESPAK  
 Shahid Baig, Managing Director, Railcop  
 Farooq A. Chaudhry. Port Consultant  
 Suleman Ghani, Chairman, P&D Board, Planning & Development Department, Government of Punjab  
 Ghulam Sarwar Kherro, Additional Chief Secretary, Planning & Development Department Government of Sindh  
 Ghulam Dastagir Khan, Additional Chief Secretary, Planning & Development Department Government of NWFP  
 Qayyum Nazar Chengezi, Additional Chief Secretary, Planning & Development Department Government of Balochistan  
 Arif Nadeem, Secretary Irrigation & Power Department, Government of Punjab  
 Shujah Ahmed Junejo, Secretary Irrigation & Power Department, Government of Sindh  
 Khalid Hussain Gillani, Secretary, Irrigation & Power, Government of NWFP  
 Abdus Salam Khan, Secretary Irrigation & Power Department, Government of Balochistan  
 Sqd. Ldr (R) Ahmed Yar Khan, Secretary, Communication & Works Department, Government of Punjab  
 Syed Faisal Saud, Secretary, Works & Services Department, Government of Sindh  
 Riaz Ahmed Khan, Secretary, Work & Services Department, Government of NWFP  
 Qamaruddin Baloch, Secretary, Communication & Works Department, Government of Balochistan  
 Khalid Javed, GM Power, WAPDA  
 Mushtaq Chaudhry, Member Water, WAPDA  
 Iftikhar Rasul Zia, GM CSC, NTDC, WAPDA  
 Dr. I.B. Shaikh, Chief Engineer, Advisor and Chairman Federal Flood Commission, Ministry of Water & Power  
 Usman Akram, Chief Engineer Irrigation (Sargodha Zone), Irrigation & Power Department, Government of Punjab  
 Mazhar Ali Shah, Additional Secretary, Irrigation & Power Department, Government of Sindh  
 Mohammad Naem, Deputy Secretary, Irrigation Department, Government of NWFP  
 Rehmatullah Bhattani, Additional Secretary, Irrigation Department, Government of NWFP  
 Mohammad Iqbal Khokar, Chief Engineer (Highways), C&W Department, Government of Punjab  
 Ali Javed Naqvi, Regional Head Operations, Prime Commercial Bank  
 Shafiq A. Musavi, DG (M), Works and Services Department, Government of Sindh  
 Saleem Raza, Project Director, Foreign Aided Projects, C&W Department, Government of Balochistan  
 Manzoor Rehman, Sr. Infrastructure Specialist, ADB  
 Syed Tanvir H. Bukhari, Chief T&C, P&D Division, Government of Pakistan

**Third Focus Group Participants, Consulting Firms –May 23, 2006 (Morning)**

Chaudry Ghulam Hussain, Managing Partner, NDC, Lahore  
 Karim Khan, Managing Partner, BAK, Peshawar  
 Ahsan Siddiqui, Dy. Managing Director, Engineering Associates, Karachi  
 Asim Osmani, Director & CEO, OCL, Karachi  
 Umar Farooq, Manager Contracts & Coordination, ACE, Lahore  
 Waqar Ahmad Farooqi, Chief Business Development, ACE, Lahore  
 S. Manzer Hussain, Director & CEO, ACE, Lahore  
 Hussain Tariq, Director, EGC, Lahore  
 Javed Khizar Hayat, VP, NESPAK, Lahore

Tariq Mehdi, VP (Power & Mechanical), NESPAK, Lahore  
Mumtaz Akhtar, General Manager, BARQAAB, Lahore  
Abid Abrar Hussain, MD, Pisces Consulting, Islamabad  
Zaheer Mirza, Chairman, ECIL, Karachi  
Aized H. Mir, Managing Director, ACC, Islamabad

**Fourth Focus Group Participants, Construction Firms –May 23, 2006 (Evening)**

Ahmad Ghazal Usmani, Chairman APCA, and CEO, Usmani Associates.  
Mohammad Yunas Khan, Secretary, APCA  
Khadim Hussain, CEO, SACHAL Engineering Works Ltd.,  
Syed Ashfaq Hussain, CEO, KARCON (Pvt) Ltd.,  
Sikandar Hayat Khattak, CEO, S. Zaman (Pvt) Ltd.,  
Khawaja Saad Masud, Mohandisin-e-Masud Builders (Pvt) Ltd.,  
Tauqir Sultan Awan, CEO, Hajvairy Associates (Pvt) Ltd., and Zonal Head APCA  
Shahid Rafiq, Director, Habib Rafiq (Pvt) Ltd., and ...  
other APCA members





Dr. M. Akram Sheikh, Lt. Gen. Mohammad Zubair, Riaz Ahmad Khan, Maj. Gen. Farrukh Javed, Tariq Hameed, Farooq Chaudhry, AVM Mohammad Safdar Khan, Ahmad Ghazal Usmani, Tauqir Sultan Awan, Sabir P. Chohan, Shahid Beg, Sarfraz Ahmed, S.U. Qureshi, Ahsan Siddiqui, Zaheer Mirza, Brig. (Retd.) Aftab Ahmad Siddiqui, Manzoor Rehman, Anjum Ahmad, Isfandyar Khan, Simon Thomas, Hiam Abbas, C. Rastogi, Hasan Zaidi, Dr. Zafar Raja, Uzma Sadaf, Hiam Abbas, Huma Waheed, Ermeena Malik, Abid Abrar Hussain, Nazifa Sheikh, Dr. Ijaz Gilani, Fatima Idrees, Khalid Khan, Uzma Sadaf, Khalid Khan, Jamshed Khan, Amer Z. Durrani, Aized H. Mir, Shaukat Javed,, Dr. Asad Shah, Lt. Gen. Nadeem Ahmed, Gen. Mehboob ul Muzaffar, AVM Pervez Nawaz, Riaz Ahmad Khan, Suleman Ghani, Ghulam Sarwar Kherro, Ghulam Dastagir Khan, Qayyum Nazar Chengezi, Arif Nadeem, Shujah Ahmed Junejo, Khalid Hussain Gillani, Abdus Salam Khan, Sqd. Ldr (Retd) Ahmed Yar Khan, Syed Faisal Saud, Riaz Ahmed Khan, Qamaruddin Baloch, Khalid Javed, Mushtaq Chaudhry, Iftikhar Rasul Zia, Dr. I.B. Shaikh, Usman Akram, Mazhar Ali Shah, Mohammad Naeem, Rehmatullah Bhattani, Mohammad Iqbal Khokar, Ali Javed Naqvi, Shafiq A. Musavi, Saleem Raza, Syed Tanvir H. Bukhari, Chaudry Ghulam Hussain, Karim Khan, Asim Osmani, Umar Farooq, Waqar Ahmad Farooqi, S. Manzer Hussain, Hussain Tariq, Javed Khizar Hayat, Tariq Mehdi, Mumtaz Akhtar, Mohammad Yunas Khan, Khadim Hussain, Syed Ashfaq Hussain, Sikandar Hayat Khattak, Khawaja Saad Masud, Shahid Rafiq and others