

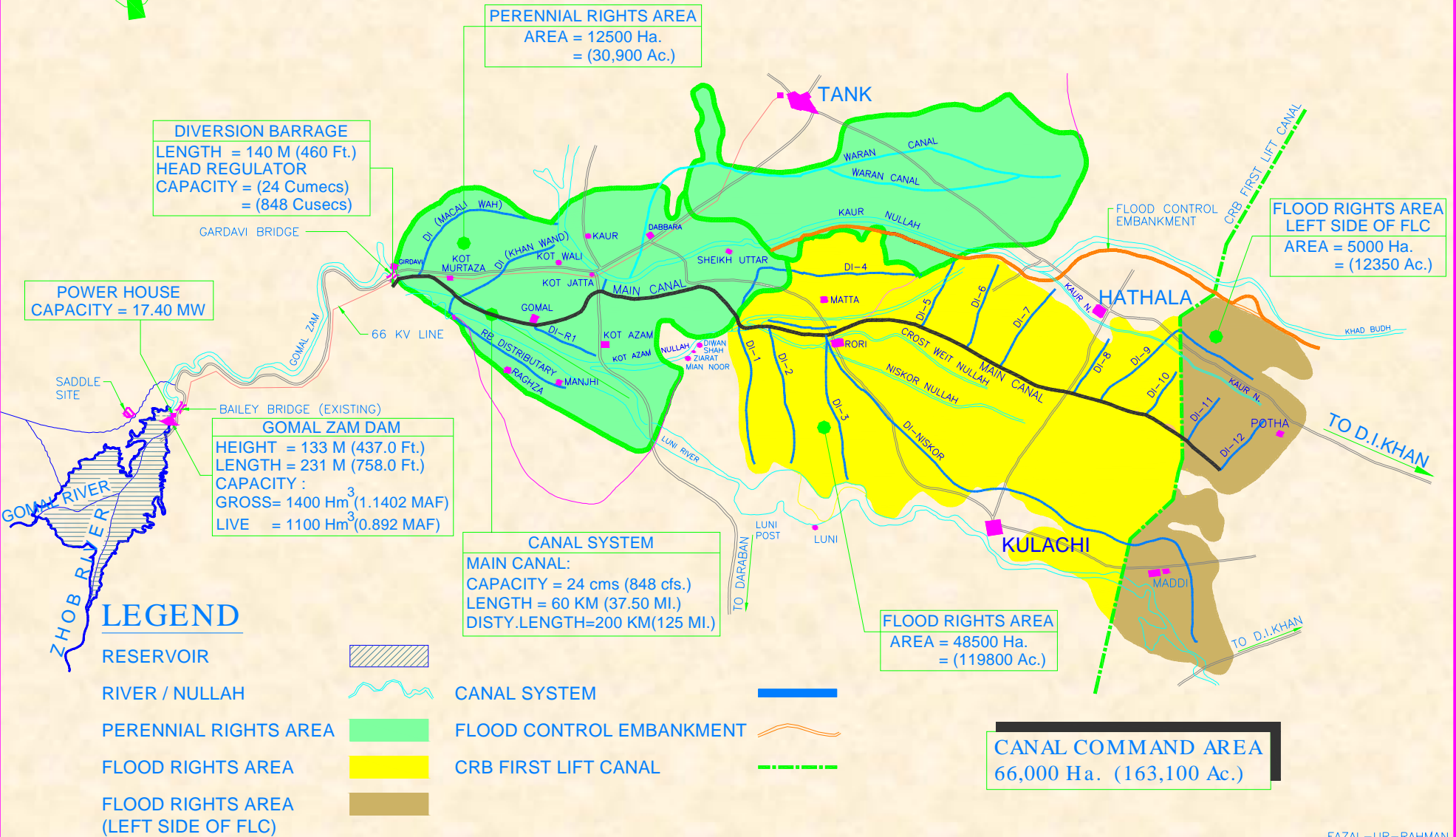


# **GOMAL ZAM DAM MULTIPURPOSE PROJECT**

## **BRIEF**

**LATEST STATUS OF IMPLEMENTATION  
AUGUST, 2007**

# GOMAL ZAM DAM MULTI PURPOSE PROJECT PROJECT LAYOUT MAP



# GOMAL ZAM DAM MULTIPURPOSE PROJECT

## SALIENT FEATURES

1	<b>LOCATION OF DAM</b>	Khajuri Kach On Gomal River
2	<b>MAIN COMPONENTS</b>	
	a) <b>DAM</b>	
	• Height	133.00 M (437 Ft.)
	• Length	231.00 M (758 Ft.)
	• Type	Roller Compacted Concrete Gravity Dam
	b) <b>RESERVOIR</b>	
	• Gross Storage	1400 HM <sup>3</sup> (1.140 MAF)
	• Live Storage	1100 HM <sup>3</sup> (0.892 MAF)
	• Dead Storage	300 HM <sup>3</sup> (0.243 MAF)
	• Dead Storage Level	711.00 M (2333 Ft.)
	• Conservation Level (Stage I)	743.20 M (2438 Ft.)
	• Conservation Level (Stage II)	750.40 M (2462 Ft.)
	c) <b>MAIN CANAL</b>	
	• Length	60 Km (37.50 Miles)
	• Capacity	24.00 Cumecs (848 Cusecs)
	• Length of Distributaries	200 Km (125 Miles)
	d) <b>COMMAND AREA</b>	
	• Perennial Water Rights	12,500 Ha. (30,888 Acres)
	• Flood Water Rights	53,500 Ha. (132,198 Acres)
	• Total Irrigated Area	66,000 Ha. (163,100 Acres)
	e) <b>POWER HOUSE</b>	
	• Installed Capacity	17.4 MW
	f) <b>BARRAGE</b>	
	• Length of Barrage	140.00 M (460 ft)
3	<b>PROJECT BENEFITS</b>	
	• <i>Irrigated Agriculture Development</i>	
	• <i>Power Generation</i>	
	• <i>Flood Control</i>	

## Project Information

Name of Project	Gomal Zam Dam Multipurpose Project
Location	South Waziristan Agency and TANK & D.I.Khan Districts of NWFP
Estimated Cost as per PC-1	Rs. 12829 Million
Date of Approval of PC-1	31.08.2001
Main objectives of the Project	<ul style="list-style-type: none"><li>a). Irrigated Agriculture Development– 163100 Acres of Land to be Irrigated.</li><li>b). Hydropower Generation – 17.4 MW.</li><li>c). Flood Protection</li></ul>

## Award of Contract on EPC/Turnkey Basis

### 1. First Bidding Cost (*Dated 20 May 2002*)

M/s CWHEC-HPE JV, China	US \$ 72.904 million	(Rs. 4389 million)
M/s TEKSER-Limak JV, Turkey	US \$ 146.277 million	(Rs. 8806 million)
M/s Dongfang, China	US \$ 186.785 million	(Rs. 11244 million)
M/s F.W.O. Pakistan	US \$ 210.233 million	(Rs. 12656 million)

### 2. Contract Awarded to M/s CWHEC-HPE JV of China on 17 June 2002 (*Now renamed as M/s Sinohydro Corporation*)

#### Component-wise cost

Design Services	US \$ 3.352 million	(Rs. 202 million)
Dam & Spillway	US \$ 34.305 million	(Rs. 2065 million)
Hydropower	US \$ 10.910 million	(Rs. 657 million)
Transmission Line	US \$ 4.223 million	(Rs. 254 million)
Irrigation & Flood Control	US \$ 20.114 million	(Rs. 1211 million)
<b>Total:</b>	<b>US \$ 72.904 million</b>	<b>(Rs. 4389 million)</b>

## Particulars of Contract Awarded to Chinese Contractor

Contract No.	GZD – 01 (EPC/Turnkey)
Name of Contractor	M/s China National Water Resources and Hydropower Engineering Corporation – Harbin Power Engineering Joint Venture (CWHEC-HPE JV)
Scope	Design and Construction of: 133 meters high Roller Compacted Concrete Curved Gravity Dam; Hydropower Installation of 17.4 MW; and Irrigation System Commanding 66000 hectares
Contract Price	Rs. 4389 Million (Equivalent US \$ 72.9 Million)
Time for Completion	04 Years & 76 days
Date of Commencement	15.07.2002
Scheduled Date of Completion	28.09.2006
Contractor commenced the works on time	

## **Stoppage of Work**

**Incident of kidnapping of Chinese Engineers Occurred on 09 October 2004**

**Contractor stopped the work forthwith.**

## **Negotiations for Resumption of Work with Chinese Contractor**

**Started in January 2005**

**Concluded in December 2005**

**Works of Irrigation Component and Transmission Line being scattered over a vast area, excluded from Contractor's Scope of Work due to security reasons**

## Summary of Negotiations with Chinese Contractor

### Dam & Hydropower Component

Cost initially demanded (January 2005)	US \$ 149.544 million	<i>(against US \$ 52.790 million as per original bid).</i>
Revised cost demanded (August 2005)	US \$ 107.148 million	<i>(against US \$ 48.567 million as per original bid).</i>
Negotiated cost (19 December 2005)	US \$ 85.000 million	

### MOU signed with the Chinese Contractor on 19.12.2005

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For the Irrigation Component M/s TEKSER of Turkey, the 2<sup>nd</sup> lowest bidder at the time of original bidding (May 2002) and FWO were asked to quote their price on BOQ basis.

FWO 's offer (July 2005)	US \$ 59.777 million
TEKSER's offer (July 2005)	US \$ 54.974 million
TEKSER's offer (December 2005)	US \$ 48.000 million



## **Termination of Contract with Chinese Contactor**

**MOU signed with the Contractor on 19.12.2005 not approved by ECC  
In the Meeting held on 03.03.2006**

Notice of Termination of Contract

Served on the Contractor

31.03.2006

Date of Termination of Contract by WAPDA

14.04.2006

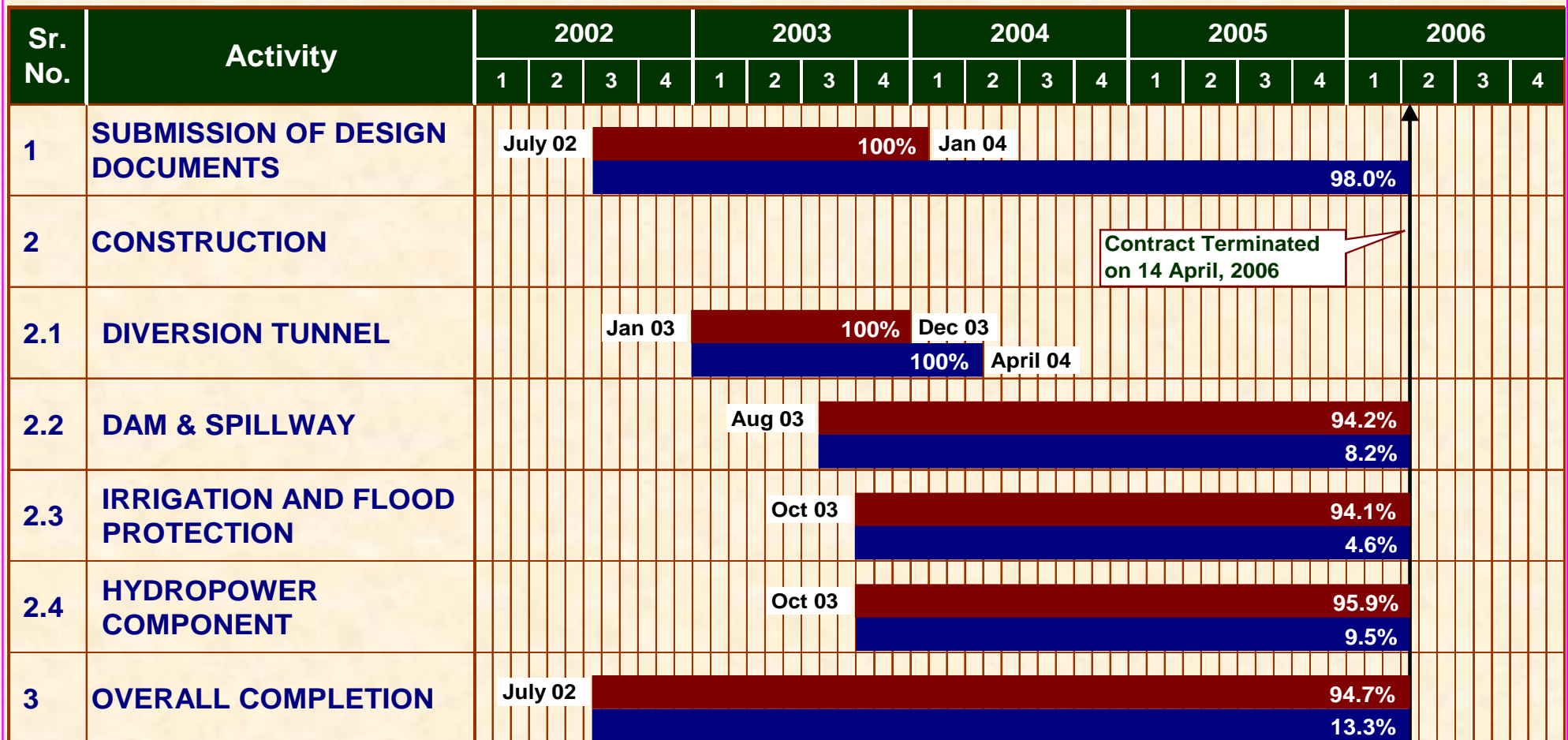
Date of signing of MOU for amicable settlement  
of consequences of termination

12.10.2006

# GOMAL ZAM DAM MULTIPURPOSE PROJECT

## CWHEC-HPE JV'S PROGRESS Vs THEIR SCHEDULE PROGRAMME

(As of 14 April, 2006)



SCHEDULE



PROGRESS



(As per Revised Schedule of M/s CWHEC-HPE JV)

# OVER ALL PHYSICAL PROGRESS

1. Progress Achieved by Previous Contractor = 13.3%
2. Progress of New Contractor (FWO) – work started on 10 August 2007
  - Target upto August 2007 = 1.6 %
  - Progress upto August 2007 = 1.1%
3. Overall Progress
  - Overall Target upto August 2007 = 14.9%
  - Overall Progress upto August 2007 = 14.4%

## Re-award of Contract to FWO

Date of ECC's decision for award of contract to FWO on Turnkey basis at negotiated rates	14.04.2006
FWO was accordingly asked to submit its bid for Dam, Powerhouse & Irrigation System	
FWO's Initial bid (August 2006)	US \$ 215 Million
FWO's Revised bid (September 2006)	US \$ 193 Million
FWO's Final bid (November 2006)	US \$ 173 Million
	Further reduced to \$ 171 Million
Date of Approval of FWO's final bid by Authority	25.11.2006
Date of Award of Contract to FWO	09.03.2007
Contract Price	US \$ 171 Million (Rs. 10401 Million)
Time for Completion	03 Years & 04 Months (including 2-months for preparatory works)
Date of Commencement (initial notification)	06.04.2007
Revised Date of Commencement <i>(due to security situation re-notified)</i>	11.06.2007
Scheduled Date of Completion	08.10.2010
FWO is responsible for security arrangements and maintenance of 34 Km Access Road to Dam site. After restoration of preparatory works, camps etc. the work actually started on 10 August 2007	

## **GOMAL ZAM DAM MULTIPURPOSE PROJECT**

**EPC/Turnkey Contract No. GZD-02**

**Bifurcation of Contract Price**

<b>Sr. No.</b>	<b>Description of Works</b>	<b>Contractor/ Sub-Contractor</b>	<b>Contract Price</b>
1.	Dam & Power House (Inclusive of 15% overheads of FWO)	FWO / Sinohydro	6,119.754
2.	Irrigation System including Flood Protection Works (Inclusive of 15% overheads of FWO)	FWO / TEKSER	3,828.880
3.	Security & Misc.	FWO	452.000
<b>Total</b>			<b>10,400.634</b>
<b>(Foreign Component = \$ 92.486 Million)</b>			

# EXPENDITURE STATUS

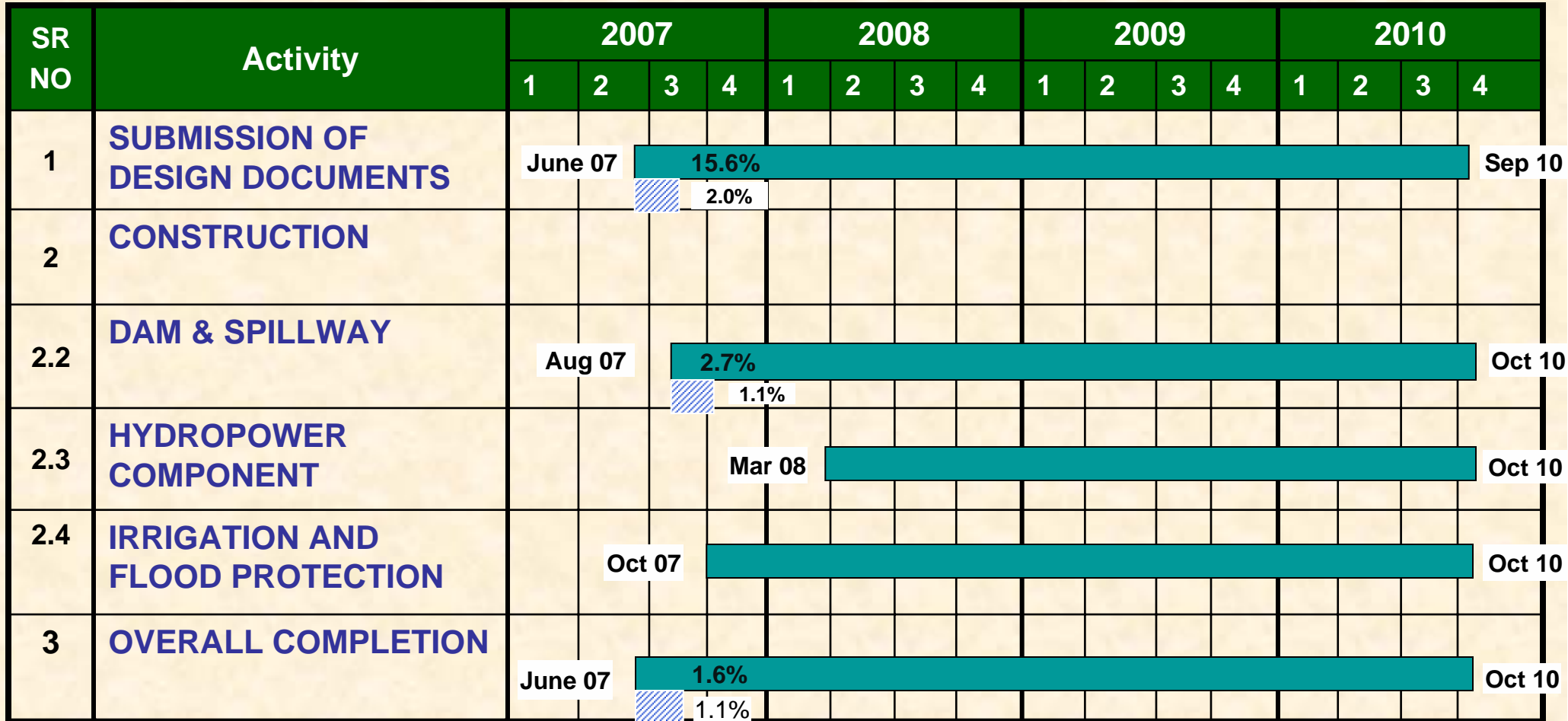
Expenditure up to 30.06.2007 : 1865 Million Rs.

Financial Year 2007-2008	Amounts (Million Rs.)		
	Local	Foreign	Total
• BUDGET ALLOCATION *	600.000	1200.000	1800.000 *
• EXPENDITURE (July – August 2007)	389.000	–	389.000
• UTILIZATION (%) OF BUDGET ALLOCATION	64.83%	–	21.60%
* Additional Requirement = Rs. 1200 Million			

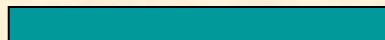
**Total Expenditure since Commencement todate = 2254 Million Rs.  
i.e. 17.57% of Approved PC-1 Cost**

# GOMAL ZAM DAM MULTIPURPOSE PROJECT

## IMPLEMENTATION STATUS OF EPC/TURNKEY CONTRACT NO.GZD-02 (ENDING AUGUST 2007)



SCHEDULE



PROGRESS



## **MATTERS REQUIRING ATTENTION**

- Improvement of Law & Order situation in the Project Area
- Extension of validity period of Loan from Abu-Dhabi Fund which had lapsed on 31 December 2006, upto December 2010
- Resolution of issues concerning Irrigation Component raised by I&P Department, GoNWFP
- Revision of PC-1