Afghanistan
Draft Reconstruction Vision

September 2002

Special Committee on
Reconstruction Vision of Afghanistan

Japan Society of Civil Engineers

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Background – Japanese Experiences -

- Completion of National Reconstruction &Development Plan shortly after the WW II
- Successful completion of National Development Plans, which played key rolls for the present prosperity of Japan
- Main contributors of the above: civil engineers
- Japanese civil engineer's natural desire: with the above experiences & as an Asian national, to contribute intellectually for the reconstruction & development of Afghanistan as a professional NGO free from the policy of any donor

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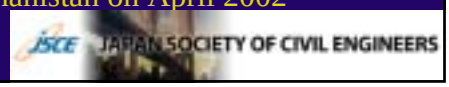
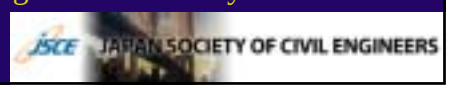
Japan Society of Civil Engineers (JSCE)

- JSCE: most likely the world second strongest group of civil engineers with 39,000 members, only next to American Society of Civil Engineers
- Composition of members: from responsible engineers of infrastructure projects to city planners, urban & rural development specialists, national development policy specialists, and specialists on cooperation with developing countries for development policy, planning & management, and implementation of infrastructure projects
- Establishment of special committee for drafting a reconstruction vision of Afghanistan on April 2002



Composition of the Vision

1. Anticipated situation at the target year of 2010 & measures to be implemented to attain sustainability as much as possible by the limited fund
   - Methodology: 1) based on the data available from Afghanistan Statistics Office, International aid agencies, UN agencies, & 2) using the technique adopted by Japanese for the preparation of Japanese National Development Plans
2. Cautions to use 4.5 b US $ pledged fund for 2.5 years



First Version of the Vision

- Kabul University is now in extensive review of the draft.
- With the input from Kabul University, some of the official of Transitional Government of Afghanistan & some of the participants of this conference, the first version of the final Vision will be completed shortly & distributed to international agencies, UN families, & bilateral donors for their consideration.
- The Vision is expected to be a rolling Vision with continuous improvement. Revised Vision will be distributed to international community whenever appropriate.

Major Aim of Reconstruction Vision

- The unification of peace-pursuing people and stabilizing the national livelihood is the top priority.
- Reconstruction centers on mid-term economic development measures and relevant infrastructure development.
- Promotion of reconstruction under this Vision is named as the ***"Crescent to Full Moon Initiative".***
- The target year for this vision is 2010.
- Establishment of a special administrative organization and the building of a relevant planning institution is expected.

Basic Concepts for Reconstruction

- Basic principles: to restore Afghanistan to its state of 23 years ago before the outbreak of civil war
  - Additional consideration: large infrastructure projects completed, or implemented but failed to complete after the outbreak to be considered in the reconstruction plan
- To reflect political & economic changes of the neighboring countries during the 23 years: 1) the end of Cold War & consequent independence of countries from former Soviet Union, & 2) economic development of all neighboring countries which took place during the past 23 years

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Basic Concepts for Reconstruction – Cont'd

- Free settlement of internally displace people & refugees
- Development Agenda: should be owned by Afghan
- Position of JSCE Vision: one of the reference materials for Afghan for its reconstruction & development strategies

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Methodology for the Preparation of the Vision

- Projection of population of the country & its breakdown in the regions as the basic information
- Projection of possible food supply & necessity for rehabilitation of irrigation & drainage system
  - Preconditions: demining & ending of drought
  - Three scenarios for annual grain supply per person: 1) 187 kg, 2) 200 kg, & 3) 250 kg

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Major Subjects Included in the Vision

- Rehabilitation of irrigation & drainage
- Rehabilitation of industry
- Reconstruction of transportation system
- Reconstruction & development strategies of cities along the crescent first, then to full moon, i.e. along the entire ring road
- Urban infrastructure such as roads, water & sewage, & electricity

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Development of (Light) Industry

Priority Area

- Intermediary goods relating to agriculture and reconstruction (fertilizers, cement, bricks, etc.)
- Daily consumer goods (soap, matches, tableware, etc.)
- Processed agricultural products (flour milling, livestock processing, etc.)
- Traditional handicrafts (handcrafted articles such as carpets)
- Marble and precious stones
- Mineral resources

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Reconstruction of Cities & Urban Infrastructure

Order of Priority :

1. Preparation of master plans for major cities even very rough plans to avoid sprawling development as experienced at most of Asian major cities including Japanese cities
2. Reconstruction of Kabul
3. Reconstruction of Major cities on the ***"Crescent Axis"***
4. Reconstruction of Major cities on the rest of the ring road

Formation of an ***"International Corridor Nation"***

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Transportation Infrastructure

- Short-term measures
  - Roads within Kabul and those connecting major cities on the ***"Crescent Axis"***
  - Safety of international standard of Kabul International Airport
  - Development of the domestic construction industry
- Mid-term measures
  - Main roads, airport, railways to the level of the 1970's
  - National road system toward a ***"Full Moon"*** (Ring and Central roads)
  - Strengthening the function as an ***"International Corridor"***

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Electric Power: Measures for improvement

- Short-term measures
  - Rehabilitation of existing facilities, mainly in Kabul
  - Improvement of operation and maintenance
  - Expansion of electric power import from neighboring countries
- Mid-term policies
  - Increase of the self-sufficiency rate of primary energy
  - Developing electric power sources using domestic natural resources
  - Construction of gas pipeline and/or transmission lines

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Urban Water Supply：Improvement Measures

- Restoration and expansion of water supply facilities
- Sustainable use of groundwater
- Technology for digging wells and maintenance
- Use of river water
- Participation from communities and NGOs
- Development of private companies
- Education for the conservation of water recourses
- Countermeasures for the pollution of groundwater

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Plans for Using the $ 4.5 Billion
Evaluation of $4.5 Billion in Pledged Aid

By the first half of 2002, $4.5 Billion is pledged over 30 months

- $ 4.5 billion too small in amount:
  - On average basis, corresponds to $ 80 per person only
  - Amounts only 3.6 million simple labor jobs annually, even if all amount is spent for job creation
  - International donor community should recognize this fact.

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Evaluation of $ 4.5 Billion in Pledged Aid Continued

- Preferably aid is not pre-conditional, but policy dialogue is essential in accordance with the latest national development framework and need assessment.
- Similarly, aid is preferably in the form of grant-in-aid rather than loan. Afghanistan is not in the development stage yet to be able to promise pay back of loans.

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Plans for Using the $ 4.5 Billion Efficient and Effective Usage

Use of appropriate technology, local enterprises & Local Engineers as much as possible & in addition:

- Adoption of labor-intensive methods
- Adoption of local know-how to restore infrastructure
- Try to develop private enterprises through reconstruction projects

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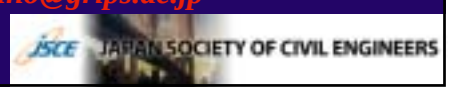
Plans for Using the $ 4.5 Billion
Efficient and Effective Usage – Cont'd

- Use NGOs and Community Forums by providing block grants together with necessary constraint conditions for their use
- Minimize use of international engineers, managers & staff
- Minimize the out flow of aid fund from Afghanistan

Plans for Using the $4.5 Billion
Concluding Remark

- In describing infrastructure reconstruction & development strategies, a number of considerations are presented to minimize the cost with the intension that as much fund could be used for social sector.
- It is emphasized that pledged aid should be disbursed as promptly as possible so that employment opportunities become available at an early date.
- Any comment is welcome from the participants of this conference for possible improvement of the Vision.
- Main text: available on ***www.jsce.or.jp*** , & any inquiry and comments be addressed to ***nishino@grips.ac.jp***



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Thank you for your attention.

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Extract of Some of the Details of the Works

- Some of the figures and tables are attached to the documents for the presentation.

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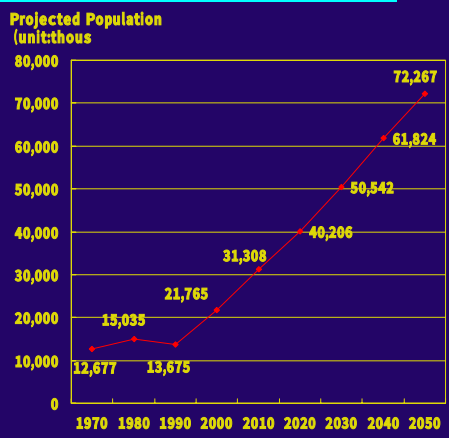
Human and National Framework
Population Trend and Future Projection

UN Population Division :
「World Population Prospects」

- An extremely clear trend of continuous population increase
- An increase of approximately **10 million people** for ten years from 2000 to 2010
- Estimated inflow of 2.6 million refugees displaced abroad



sources) United Nations Population Division
World Population Prospect : The 2000 Revision

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Human and National Framework
Population Trend and Future Projection

Projected Population by Region

- Major increases for Kabul and provinces along the Ring Road and border.

(unit : thousands)

Region	1998	2010	Variation
East-Central (EC)	6,147	9,340	3,193
Eastern (E)	2,685	4,772	2,088
North-Eastern (NE)	550	814	264
Northern (N)	5,259	7,987	2,727
Western (W)	2,135	4,004	1,869
Southern (S)	2,450	3,889	1,439
Central (C)	315	502	187
Total	19,541	31,308	11,767

sources) Central Static Office Estimate
UN Population Div. : *World Population Prospect*

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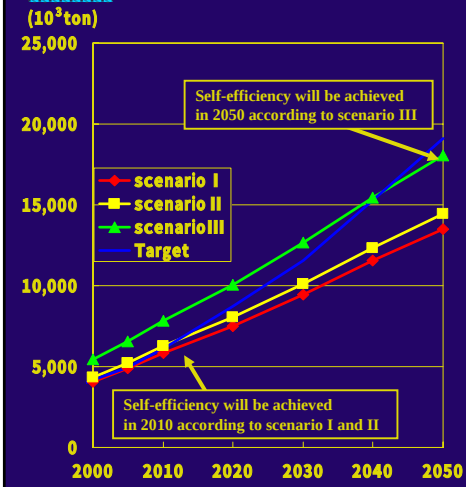
Rehabilitation of the Economy and Industry
Projected Balance of Demand & Supply for Grain



- **Annual grain consumption per capita**

  Scenario I ：187kg (min. consumption for survival)

  Scenario II ：200kg (avg. of low-income countries)

  Scenario III ：250kg (min. energy intake by FAO)

- **Production target**

  Crop per unit area reaches the level of neighboring countries in 2010, and the world level in 2040.

  The rate of irrigated area expansion is assumed to be 25% per every 10-year.

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Improvement of Social Infrastructure
Electric Power：Demand and Supply by Area

Area	Major City	Existing Output Capacity (MW)	2005 (60kWh / capita)			2010 (300kWh / capita)		
			Pop. (10^3)	Supply Shortage		Pop. (10^3)	Supply Shortage	
				Energy (GWh)	Capacity (MW)		Energy (GWh)	Capacity (MW)
East Central	Kabul	305	7,976	-323	-123	9,340	1,733	495
Eastern	Jalalabad	12	3,830	198	75	4,772	1,389	396
North Eastern	Fayzabad	0	703	41	16	814	243	69
Northern	Mazari Sharif	10	6,822	384	146	7,987	2,362	674
Western	Herat	1	3,150	18	71	4,004	1,199	342
Southern	Kandahar	46	3,262	74	28	3,889	1,004	287
Central	Bamyan	0	420	3	1	502	151	43

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Improvement of Social Infrastructure
Urban Water Supply：Demand and Supply

City	Population in 1998 (10^3)	Population in 2010 (10^3)	Target Access (%)	Demand in 2010 (m^3/day)	Existing capability (m^3/day)	Necessary capacity (m^3/day)
Kabul	2,137	2,867	80	114,664	83,000	31,664
Jalalabad	165	322	50	8,059	4,000	4,059
Fayzabad	180	239	20	2,393		2,393
Mazari Sharif	196	277	50	6,926	3,500	3,426
Herat	221	468	50	11,698	5,500	6,198
Kandahar	413	584	40	11,678	3,500	8,178
…	…	…	…	…	…	…
TOTAL	6,373	9,104		203,917		97,417

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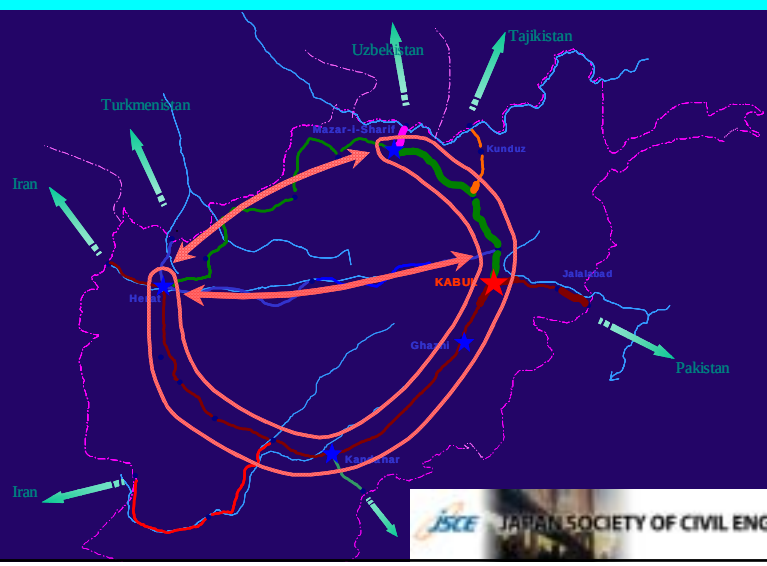
"Crescent to Full Moon Initiative"



Back

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Conditions of Irrigation

(unit : 10^3 ha)

Source	Irrigation status	Amu River		Indus River		Shistan River		Total	
		area	%	area	%	area	%	area	%
River	Plenty	402	39	376	36	260	25	1,038	100
	Scarce	240	74	60	19	23	7	323	100
	F-flow	517	61	17	2	318	37	85213	100
Kareze	Plenty	3	4	32	41	44	55	79	100
	Scarce	2	20	2	20	6	50	10	100
	F-flow	2	3	4	5	73	92	79	100
Spring	Plenty	39	21	32	17	116	62	187	100
Well	Plenty	8	50	1	6	7	44	16	100
Total	Plenty	452	37	441	82	427	50	1,320	51
	Scarce	242	20	62	14	29	4	333	13
	F-flow	519	43	21	4	391	46	931	36
	Total	1,213	100	524	100	847	100	2,584	100

Source) Y. Kunihiro (1975)

Back

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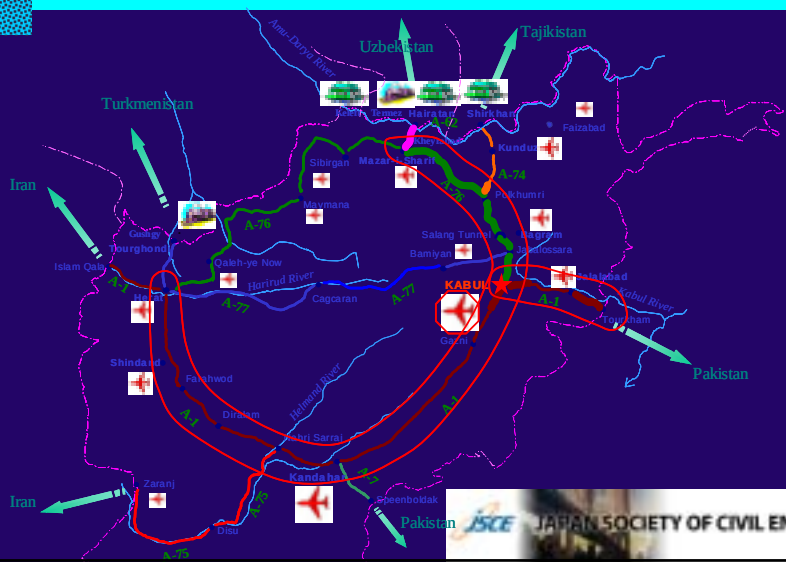
Transportation: Short-Term measures



Back

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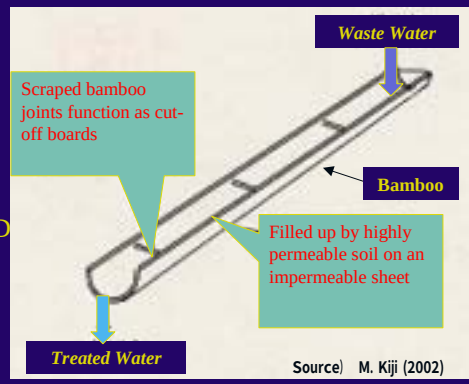
A sample Counter Measure for the Pollution of Groundwater

Domestic Wastewater Purification with Sloped Thin Layers of Soil

- Improvement of water quality without power and aeration
- No mechanical equipment needed
- Low costs and easy maintenance
- Simultaneous removal of BOD/COD and nitrogen/phosphorous
- Hollow plants like a bamboo can be applicable



Back

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