

Water shortage



**ASSIGN
BUSTER**

Presently, out of total cultivable land of 77.1 million acres, we are only cultivating 54.5 million acres because of shortage of water. 2) With the increase in population, Pakistan will have a shortfall of 11 million tons of major food grains by 2010 and 16 million tons by 2020. This food grain deficit will increase to 28 million tons by 2025. 3) High power tariff burdening consumers can be reduced by correcting Hydro-thermal generation ratio of 30-70, which used to be the opposite in 1970. 4) Only 14 % of Pakistanis total hydrophone potential of 50,000 mm being tapped at present. Average Hydro generation unit cost for new projects is RSI. 1.00/KHZ against RSI. 7.00/KHZ for new oil based thermal generation. 6) Pakistanis electricity demand and increasing by 7 % per annum. 7) Agriculture is the backbone of Pakistanis economy; 23.3 % of GAP. 8) 64 % Pakistanis depend on agriculture. 9) 60-70 % of exports depend on it. 10) Pakistan today is among one of the world's fastest growing populations now estimated at over 150 million. Due to the lack of large river regulation capability through sizable storages, the country is facing serious shortages in food grains.

Given the present trend, Pakistan could soon become one of the food deficit countries in the near future. Therefore, there is a dire need to build storages for augmenting agriculture production. Travel, Mangle and Chasm reservoirs have already lost about 5 map due to sedimentation. It is estimated that by the year 2012, this loss would increase to the original combined capacity of Mangle and Chasm reservoirs. 1) Industrial expansion and growth essential for economic development and prosperity. 2) It will provide the better clean environment for the human beings. 3) Reduction in barren lands.

Only 40% of Pakistanis total hydro power potential of 50000MW is being tapped at present. Average Hydro generation cost for new projects is RSI 1.007/KHz as against RSI 7/KHz for new oil base thermal generation. Pakistanis electricity demands are increasing by 7% per annum. Saving import of fuel for thermal power plants reduce cost of electricity I. E. RSI /KHz.

Electrification of industries of towns and villages. Reduces cost of electricity help manufacturers. 2) Agriculture Agriculture Torts ten Dockland AT Pakistanis economy. T GAP Pakistanis depend directly on agriculture. 60-70% exports depend on it.

Water is a life line for agriculture. Average rainfall of Pakistan is below Bag. Thus, water storage is needed or agriculture as it is a precious resource and we should not waste a drop of it. Out of Pakistan total geographical area only 17.1 Mace is suitable for agriculture. A total of 44. Massacres of agriculture land is irrigated besides only massacres Brain land under cultivation. If water is available the remaining 22. Massacres of land(29% of total suitable area for agriculture) can turn productive if no additional water is tapped. It nears that 1/3 of agriculture potential will remain untapped.) Industry 4) Drinking Water And Sanitation Pakistanis population is increasing by over 2% per year requiring availability of more lean drinking water. Cities, towns, Villages expanding requiring more water for sanitation purposes. Implementation of clean drinking water schemes possible with availability of more water. 5) Environment Better clean environment for humans. Reduction in barren land. Controlled rivers and canals. More land area under cultivation, greenery and habitation to improve better water management and cleanliness. More forests and CEO system preservation and flood control.

ROLE: Replacing storage lost by sedimentation in existing reservoirs at Mangle, Chasms and Travel and providing additional storage of water to meet existing water storages during early Karri period of April/June. Particularly critical for cotton crop in Kinds). Providing effective regulations of Indus River to meet Karri allocation of provinces under WAHOO. To control flood in the Indus to enable provisions of perennial tube well irrigation to the revering area in Kinds. Generation of Hydroelectric power at low cost. Reducing dependence on imported fuel, saving foreign exchange.

I. Reservations of Kinds: 1) No surplus water is available for storage. 2) There is the fear that there is not enough water in the Indus for these mega projects to be used optimally I. E. There would be no surplus water to fill Calabash reservoir.) The project would render Kinds into a desert. 4) Kind's water supply which is already at low level will be reduced further since the regulation of the flow of the river might enable the upper riparian to take away more of the water and thus starve the lower riparian of irrigation for its agriculture (Kinds is the lower riparian).) Kind's worries about possible environmental problems. Its coastal area, wanly NAS suffered as a result AT SEA water moving unto ten K need to minimum 3. MAP of water escapade per annum in the INDUS to offset the negative ecological impact on the river DELTA. Kinds fears that: " Sea water intrusion n Indus estuary would increase. Mangrove forest, which is already threatened, would be further affected adversely. Fish production, drinking water supply below KYOTO would be adversely affected. " CRITICISM: According to experts, these apprehensions are baseless and the real issue is that of politics. Dams don't consume water.

They store water during floods and make it available for crops demand bases for the dry period. The share of water would be strictly governed by WAHOO. Mangrove forests cover area of almost 0. MAMA. In the forest spreading from Karachi in the west to the Rain of Ketch in east, 95% of forest population consists of a SALT -TOLERANT variety. Similarly, a recent study has shown that instead of reduction fish production has increased. Moreover, downstream to KYOTO barrage, ground water is saline or brackish not suitable for irrigation or drinking. After KGB there would be drinking water available. II.

Reservations of Balloonists: 1) The supply of water from Indus, through the Pat Feeder canal, may be curtailed. III. Reservations of NFW: 1) It will flood Onshore and lot of fertile areas will be waterlogged, besides displacing a large no of people. 2) It will displace 42000 people.) There would be water logging and salinity in Merman, Bibb and Swab'. 4) It is also feared that historic flooding of Appeaser Valley including Nonusers would be aggravated in the event of recurrence of 1929 record flood. CRITICISM: Nonusers, Merman and Swabs has altitude higher than that of KGB (915 feet above sea level).

Thus KGB would not result in flooding or water logging [salinity. Merman, Bibb and Swabs are at 970-962-feet above MS (Mean Sea Level) Total cultivable land submerged would be 27500 Acres (24500 in the Punjab and carcass in NFW). Thus submerged irrigated land would be only caresses (2900 Acres in Punjab and acres in NFW. As far as the displacement of people is concerned the people have in their minds the problems faced after the construction of Travel new model village should be constructed to

resettle the effected families with facilities of water supply, electricity, roads, dispensaries, schools etc. . DIMMER BASH DAM: The project is located on Indus River, about 315 Km upstream of Travel Dam, 165 Km downstream of Gilt and 40 Km downstream of Chills. The dam would have a maximum height of ohmmeters and impound a reservoir of about 7. 4 map, with live storage of more than 6. 4 map. Mean annual discharge of Indus River at the site is 50 map. The dam will impound 15 % of the annual river flow. The dam project would cover an area of 110 Km and extend 100 Km upstream of the dam site up to Ratio Bridge on Karakas highway. The estimate cost is \$ 6. 5 billion. It will affect 30 villages and 2200 houses.

It will also affect 22000 people. The total area under reservoir will be 25000 acre and it will generate 16500 AWG/ year. Benefits: 1) Availability of 6. MAP annual surface water storage to supplement irrigation supplies during low flow periods. 2) Clean and cheap energy through 4500 MM generations.) Deduction of dependence on thermal power thus, saving foreign exchange. 4) Employment opportunity, particularly to ten locals, ruling ten construction Ana operations. 5) Creation of masses infrastructure leading to overall socioeconomic uplift of the area and standard of living of people.