

A Participant's Observations of International Water Experts' Visits to China, 1974 and 1980

James E. Nickum, Fellow
International Water Resources Association

1974 Delegation and places visited

Maurice Albertson (head)
George Bugliarello
Ven Te Chow (Pres., IWRA)
James Daily
Charles Greer
James E. Nickum
Dean Peterson
Hunter Rouse
William Sayre
Richard Shen
Chong Hung Zee

Pearl River Delta,
Hangzhou (Xinanjiang),
Shanghai,
Nanjing,
Yangzhou (Jiangdu),
Zhengzhou (Mangshan, Huayuankou,
Red Flag Canal,
Beijing (Miyun),
Hebei (Cunhua),
Tianjin (Hai R)

In one month

Mahmoud Abu-Zeid (future
IWRA President)

Asit K. Biswas (head) (future
IWRA President)

Charles Greer

Reimer Herrmann

James E. Nickum

Bruce Stone

M. Okamoto

Gaylord Skogerboe

Field trip

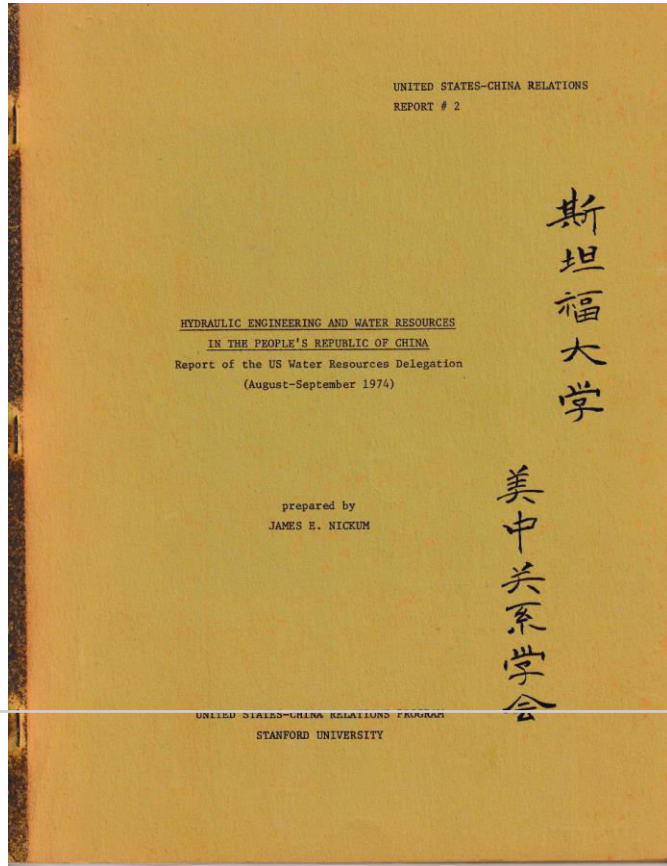
From Beijing to Danjiangkou along
the proposed Middle Route of South-
North Water Transfer, then along the
Han River to Wuhan.

By boat from Wuhan to Nanjing.

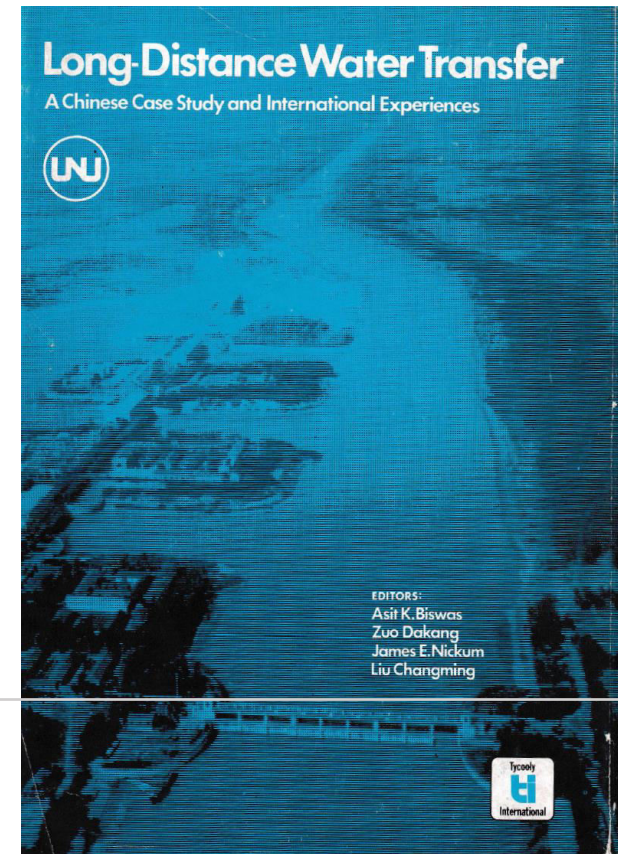
From Yangzhou to Beijing along the
proposed East Route of SNWT.

Symposium in Beijing

Reports from the two trips



1974 US Water Resources Delegation to China



1980 CAS-UNU survey of南水北调的中,东线

Note that I am a social scientist, not a hydraulic engineer, but I did write the trip report. It is out of print, but I will scan it and put it on Research Gate.

- The projects we saw, both state and local, were often built with “old” or often innovative techniques, reflecting the resources available at the time (a lot of labor, little capital)
- At times, such as during the Great Leap Forward, risky procedures were taken, such as the “Three simultaneous” (三个同时), where survey, design, and construction were carried out at the same time. E.g., part of the Miyun Reservoir.
- Nonetheless, the projects were sound, and usually built in an attractive way, and I suspect most of them are still in operation today, nearly 50 years later.
- Their original uses were sometimes not “sustainable,” however, because the projects were “adaptable”. In particular, the Miyun Reservoir, which was originally for irrigation and water supply to Tianjin, shifted to providing water to Beijing’s urban areas.. Some of the projects, such as the Miyun and Red Flag Canal, are also major tourist sites, I understand.

Here I rely on the observations of Liu Changming and Zuo Dakang, in *Long Distance Water Transfer*, 1983, ch. 12.

- Reduction in flow of Han River and Changjiang below Danjiangkou, changing siltation patterns (“only possible problems. Further research is necessary...”)
- Mosquito control on the enlarged Danjiangkou Reservoir
- Impacts on Changjiang estuary from East Route diversions during the dry season
- Pollution along both routes
- Secondary salinization of the soil in the North China Plain

In general, it was felt that more studies were necessary, but most or all of these problems could be taken care of by proper design of the water transfers.

In some cases, other developments afterwards, especially the lowering of the shallow groundwater aquifer in North China, “solved” the environmental impact problem.

Again, a message is that sustainability is hard to predict over long periods of time.

I have made a number of black and white prints from the color slides I took during these three trips.

An exhibition of 18 of them (in honor of this being the XVIII WWC) is on show at this Congress. I hope you will visit it and that you will enjoy it.

I leave you with two that are not in the exhibit and one of me that is in that collection. I think the Grand Canal looks much different now, and perhaps I do too.

Thank you for your attention!



Wooden shiplock gate, Ganzhutan



Dawn Aqueduct, Red Flag Canal

