



# *Applications of the SWAT Model in China*

Fanghua Hao

School of Environment, BNU  
2005.7.Zurich

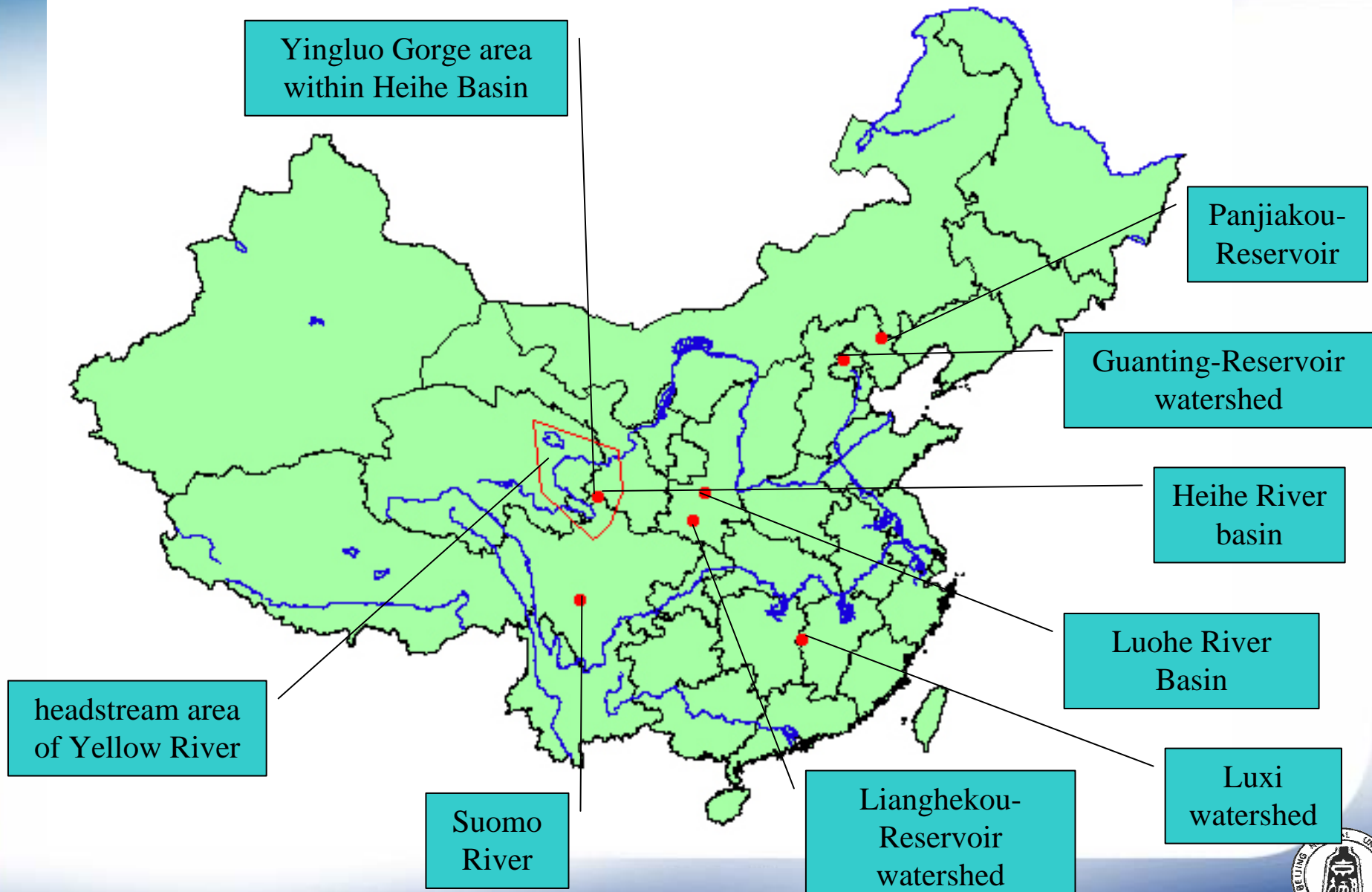


# Applications of the SWAT Model in China

1. *Application to Luohe River Basin*
2. *Application to Guanting-Reservoir watershed*
3. *Application to Heihe River basin*
4. *Application to the Yingluo Gorge area within Heihe Basin*
5. *Application to Luxi watershed*
6. *Application to Panjiakou-Reservoir watershed*
7. *Application to of headstream area of Yellow River*
8. *Application to Suomo River watershed*
9. *Application to Lianghekou-Reservoir watershed*



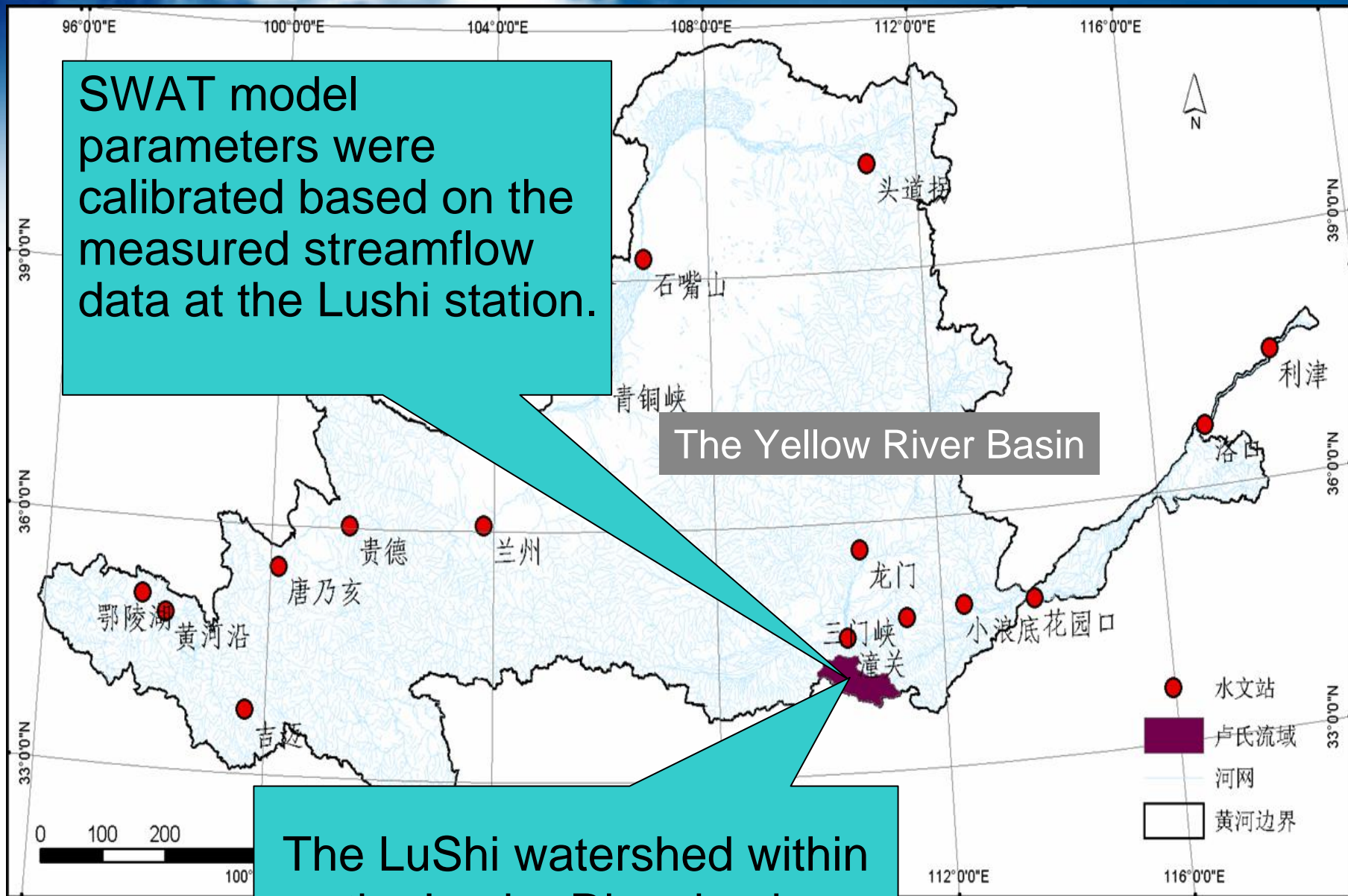
# Areas of applications of the SWAT Model in China



SWAT model parameters were calibrated based on the measured streamflow data at the Lushi station.

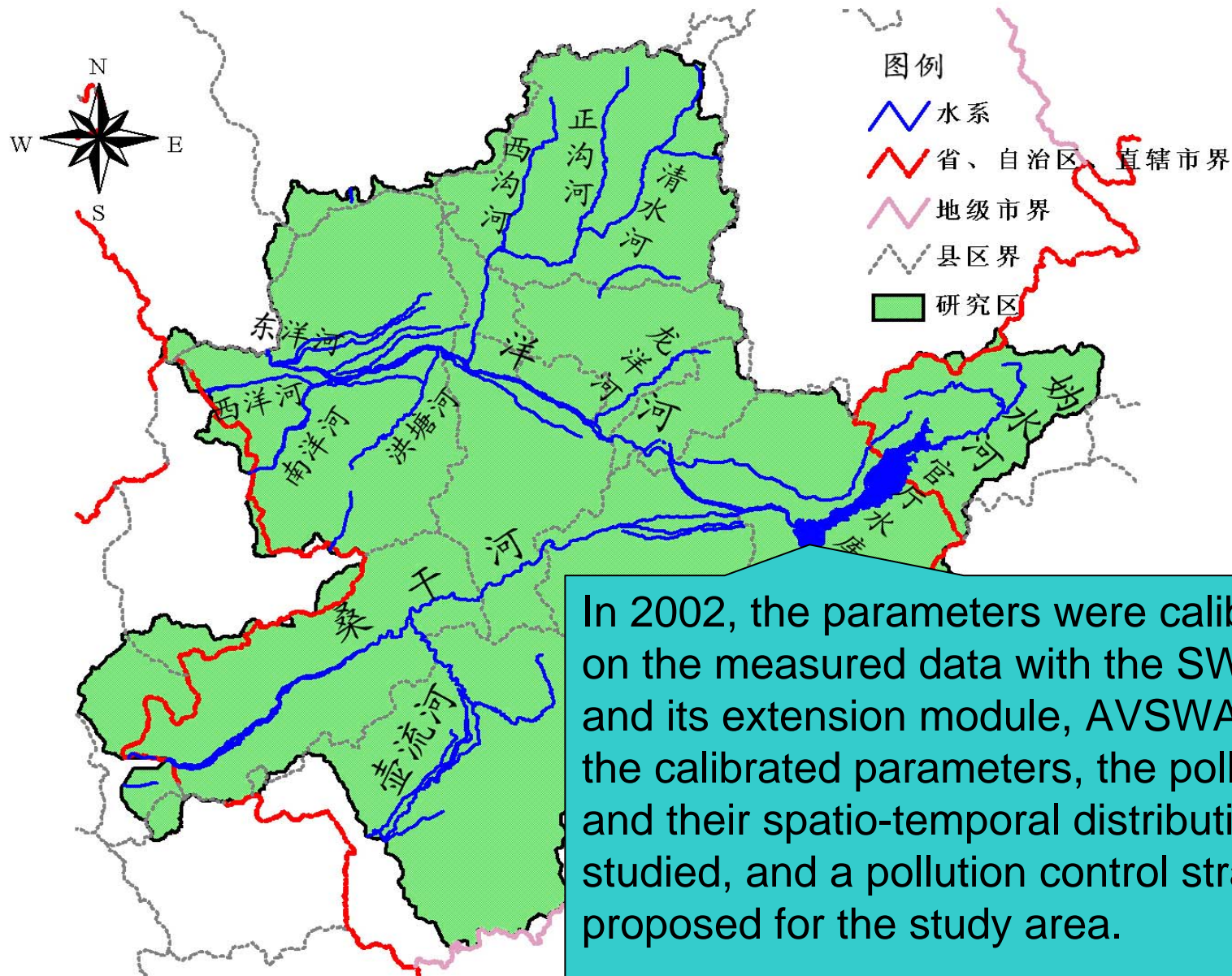
The Yellow River Basin

The LuShi watershed within the Luohe River basin





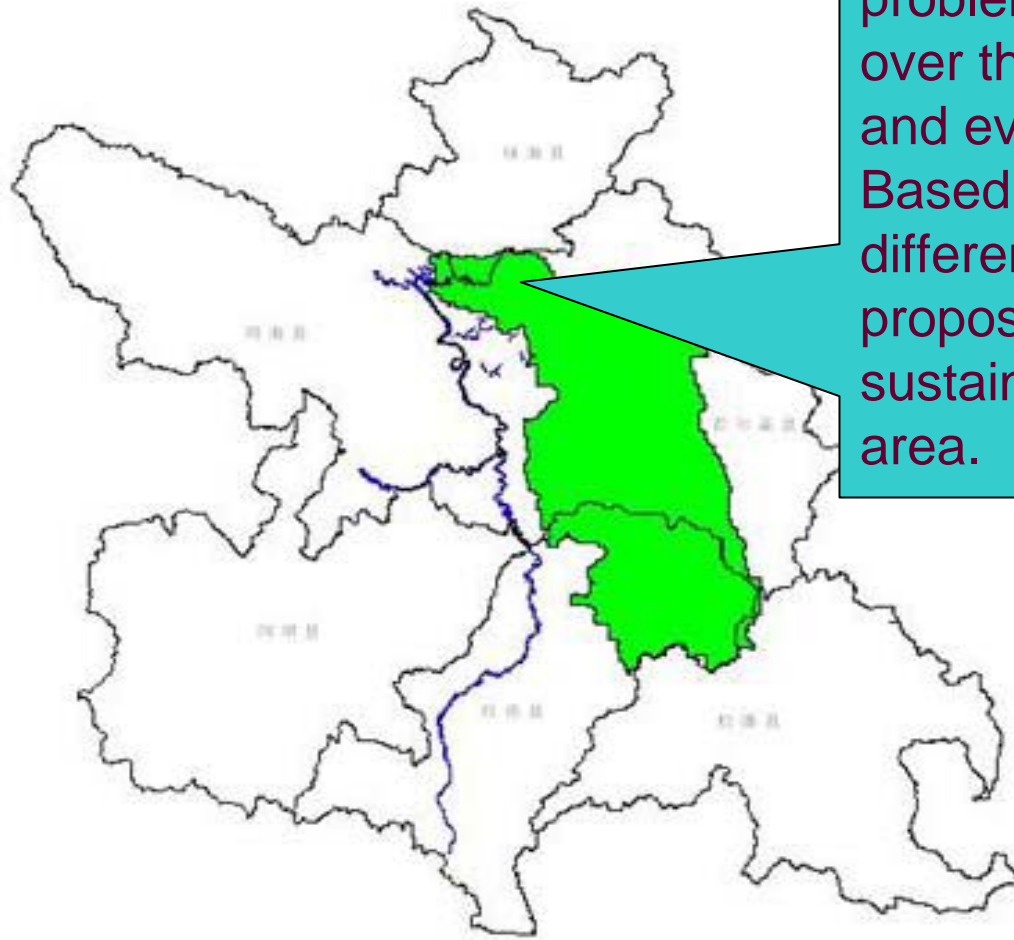
# A map of the Guanting Reservoir Basin



In 2002, the parameters were calibrated based on the measured data with the SWAT model and its extension module, AVSWAT. Based on the calibrated parameters, the pollutant loads and their spatio-temporal distributions were studied, and a pollution control strategy was proposed for the study area.

# Map of the Heihe River Basin

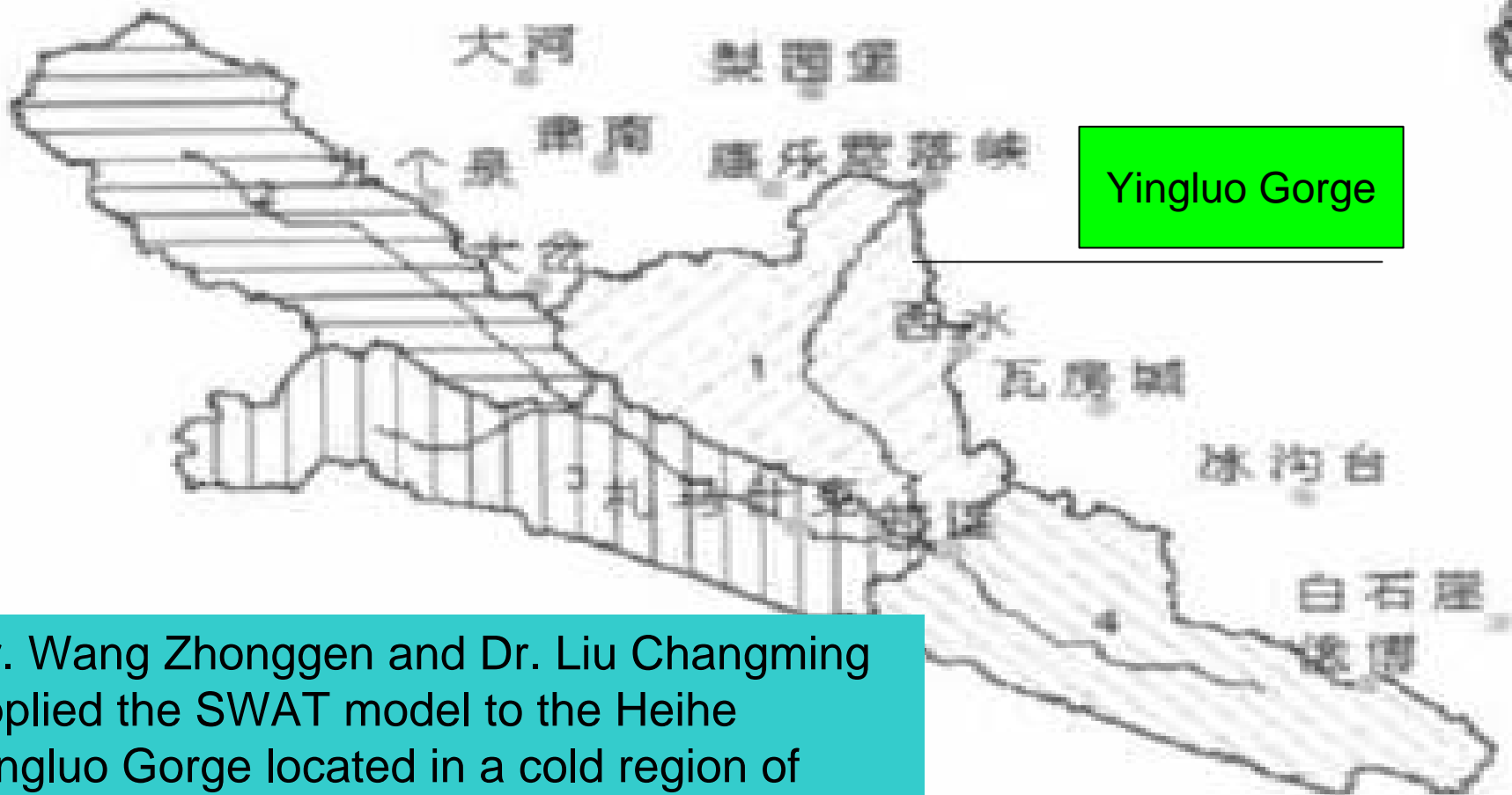
In 2004, the non-point source pollution problems mainly caused by livestock, over the Heihe river basin were studied and evaluated by using the SWAT model. Based on sensitivity analyses for different livestock scenarios, they proposed an effective strategy for having sustainable development for the study area.



Heibairiverarea.shp  
Watershed  
Digitized streams

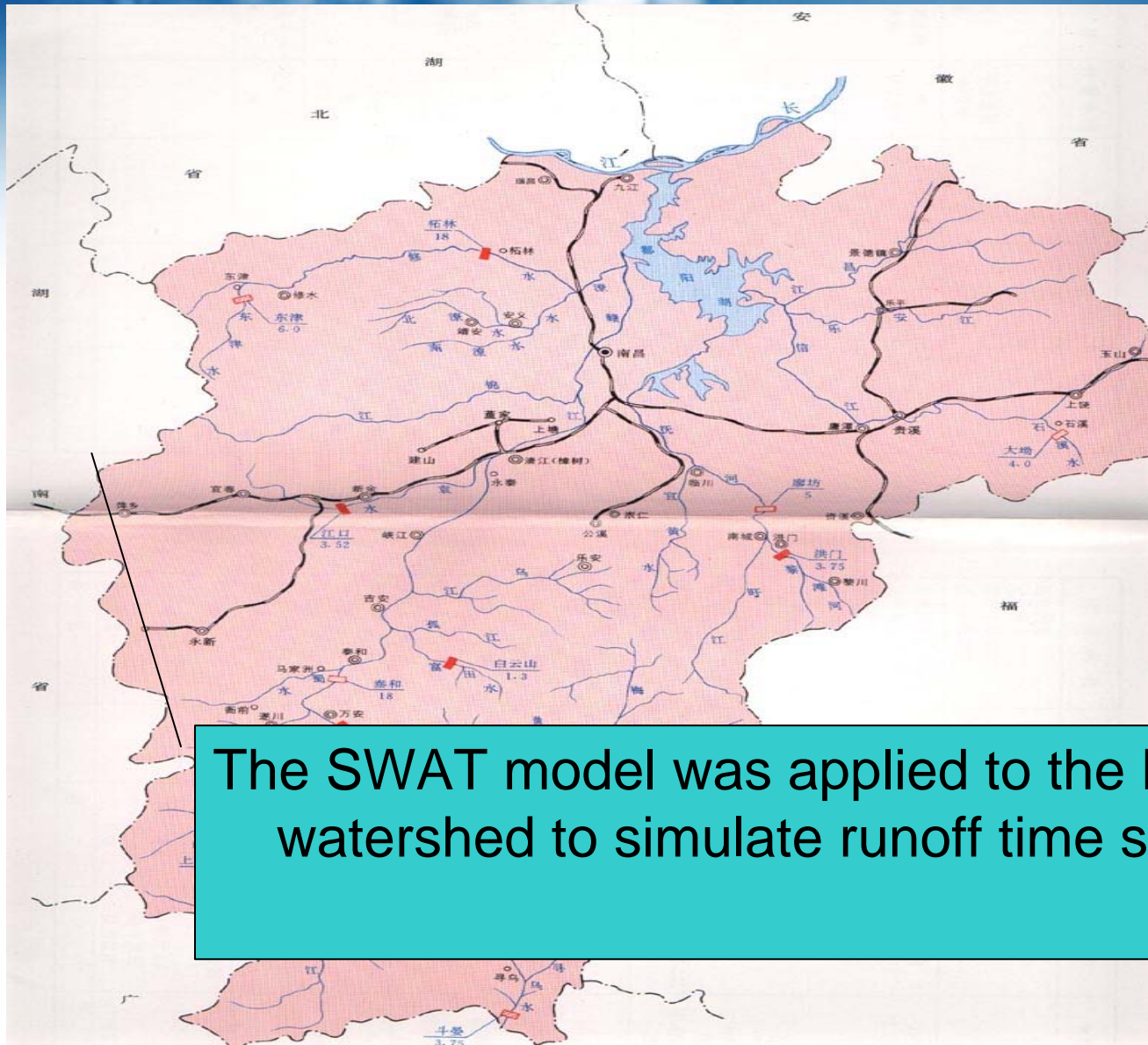


# Map of the Yingluo Gorge area within Heihe Basin



Dr. Wang Zhonggen and Dr. Liu Changming applied the SWAT model to the Heihe Yingluo Gorge located in a cold region of Northwest China.





The SWAT model was applied to the Luxi watershed to simulate runoff time series.

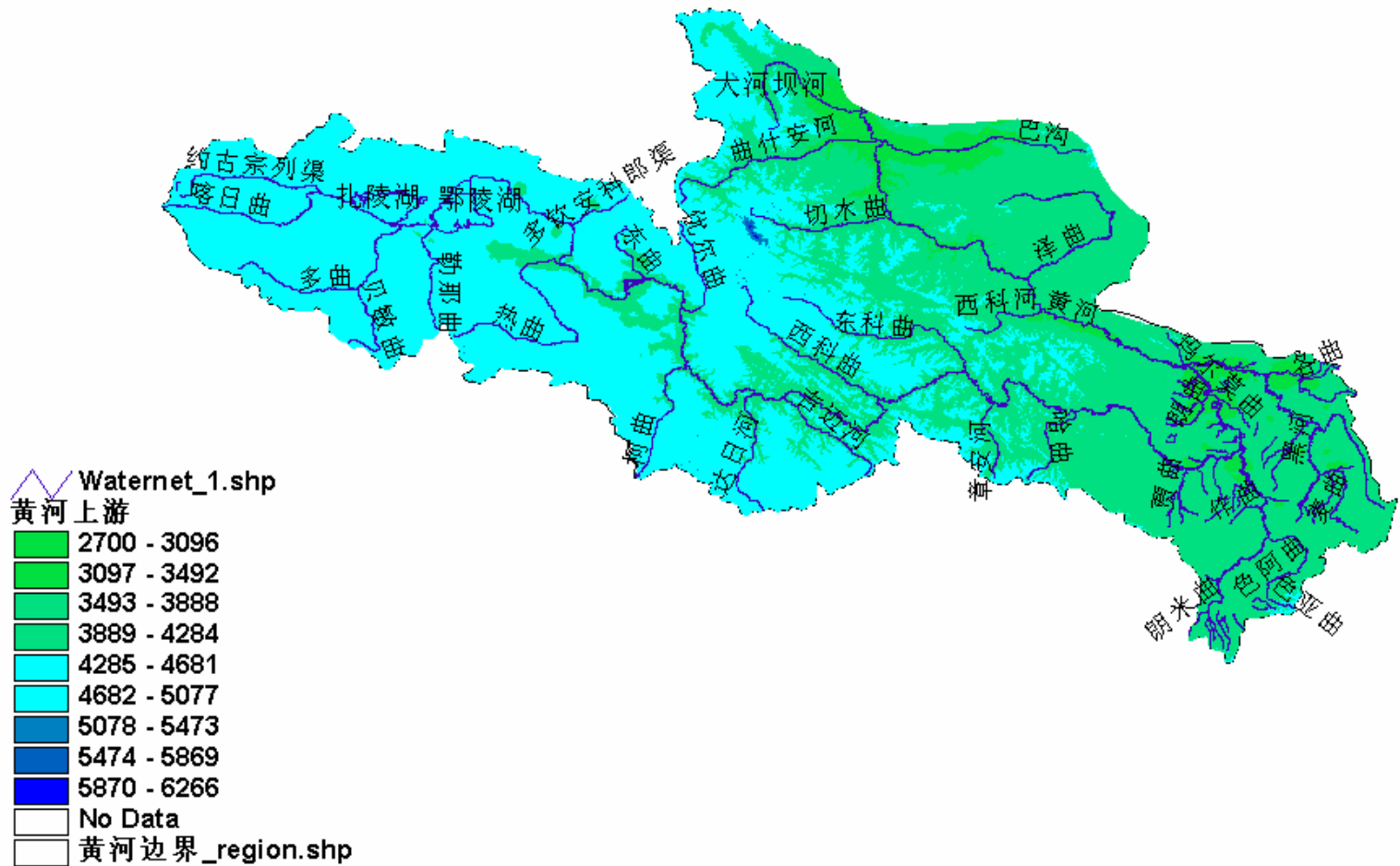


NPS production load in upstream areas of Panjiakou Reservoir was studied in 2002.

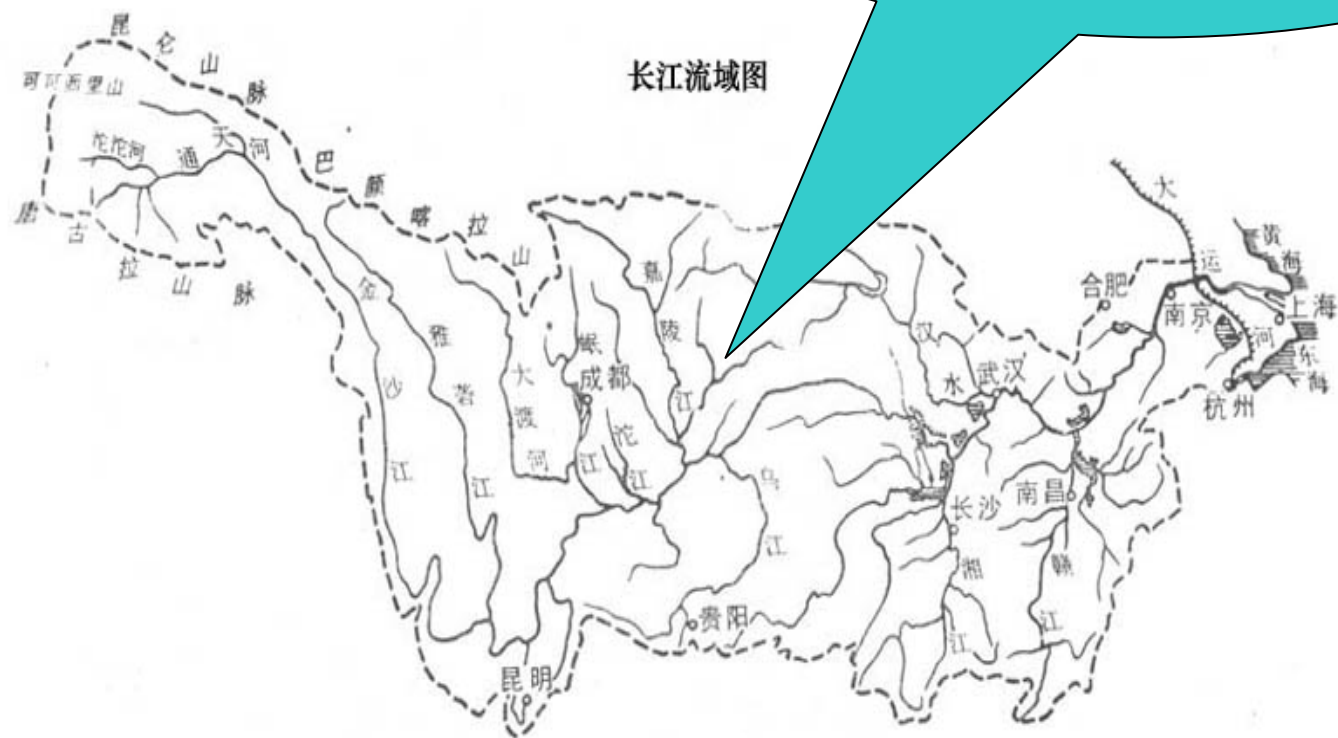


Panjiakou-Reservoir

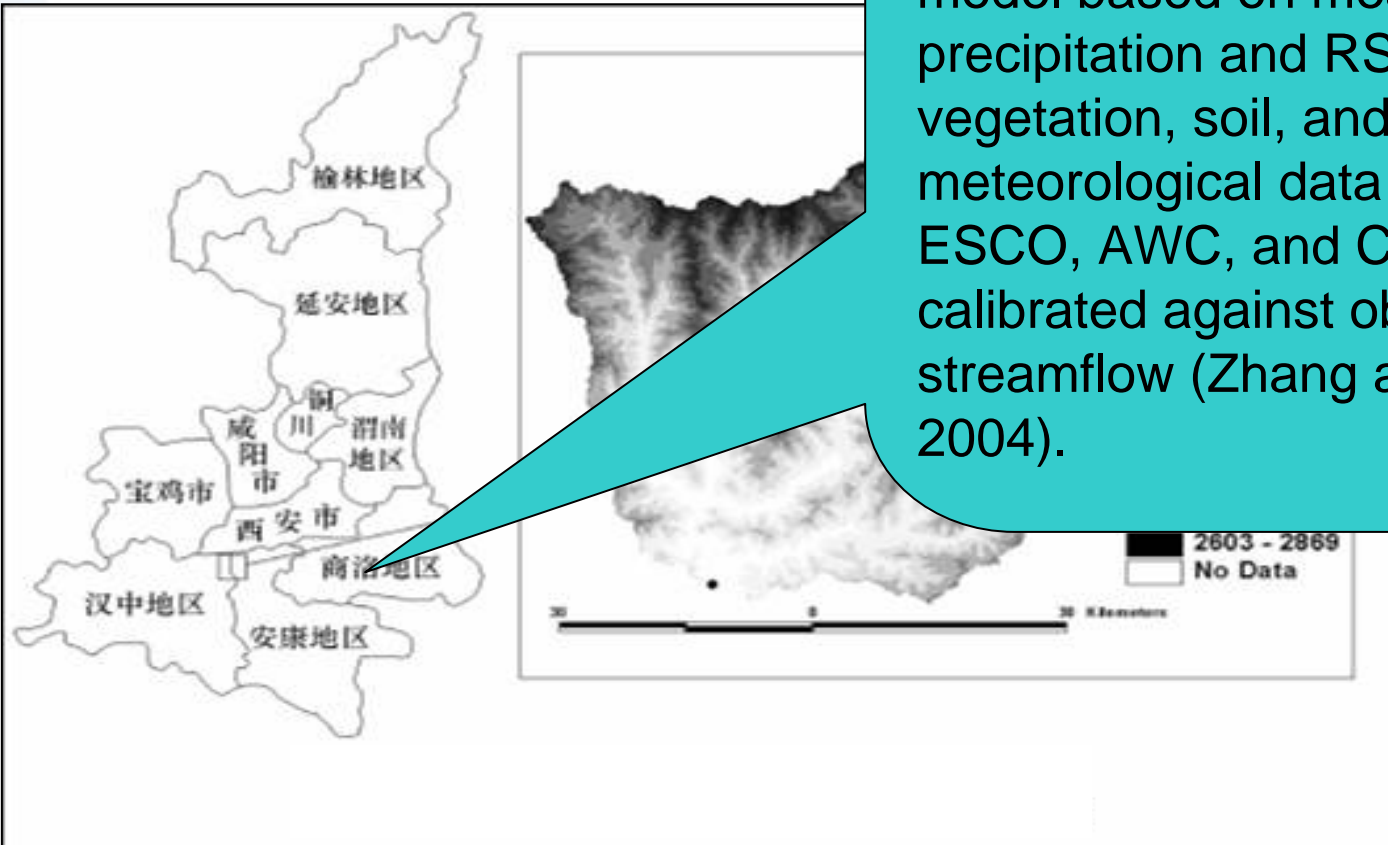
**Runoff changes were studied in 2003 for the Yellow River headwaters under different climate and land coverage scenarios.**



The SWAT model was used to study runoff under different climate and land use changes (Chen Junfeng and Chen Xiuwang, 2003).



Monthly runoff from 1981-1985 was simulated using the SWAT model based on measured precipitation and RS/GIS-derived vegetation, soil, and meteorological data in which ESCO, AWC, and CN2 are calibrated against observed streamflow (Zhang and Zhu, 2004).





THANK YOU!

