Progress and future plans

(Water resource assessment)

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WORKPLAN: Water Resource Assessment **GAO Ge and Hwirin KIM**

Activities	Actions	Outputs	Resources	Milestones	Linkages
1. Assessment of basin-wide water resources availability, including use of climate predictions (3.3.2)	• Prepare assessment and outlook of basin-wide availability water surplus and deficits on a national level in a regional context including the use of climate scenarios. (Priority C)		RAII		RAII ;CHy
2. Assessment of basin-wide water resources availability, including use of climate predictions (3.3.2)	• Set up knowledge base to adapt to changes in water resources availability. (trends, outlook) (Priority A)	Report related to the case studies	RA II Research Documents	- collection case studies in Feb.2015 -summary the achievements in Jun. 2015 -Final report in Dec. 2015	RAII, AWG
3. Implementation of Water Resources Assessment (WRA) (3.3.3)	• Provide guidance materials for WRA linking to Climate prediction - downscaling - monthly and seasonally prediction WRA models - WRA (Priority B)	Guidance for WRA.	China Korea	. - Provided manual in Dec.2016	RAII CHy
4. Development of national and regional capacity building programmes and related training activities for hydrological services (3.3.4)	• Organize a training course related to the advancements of WRA : -Downscaling methods; -Data collection; -WRA methods; -WRA Information system (Priority B or C)	Training Course	WMO Regional Training Center in Nanjing	Training Course in Jun. 2016	

Activity Two

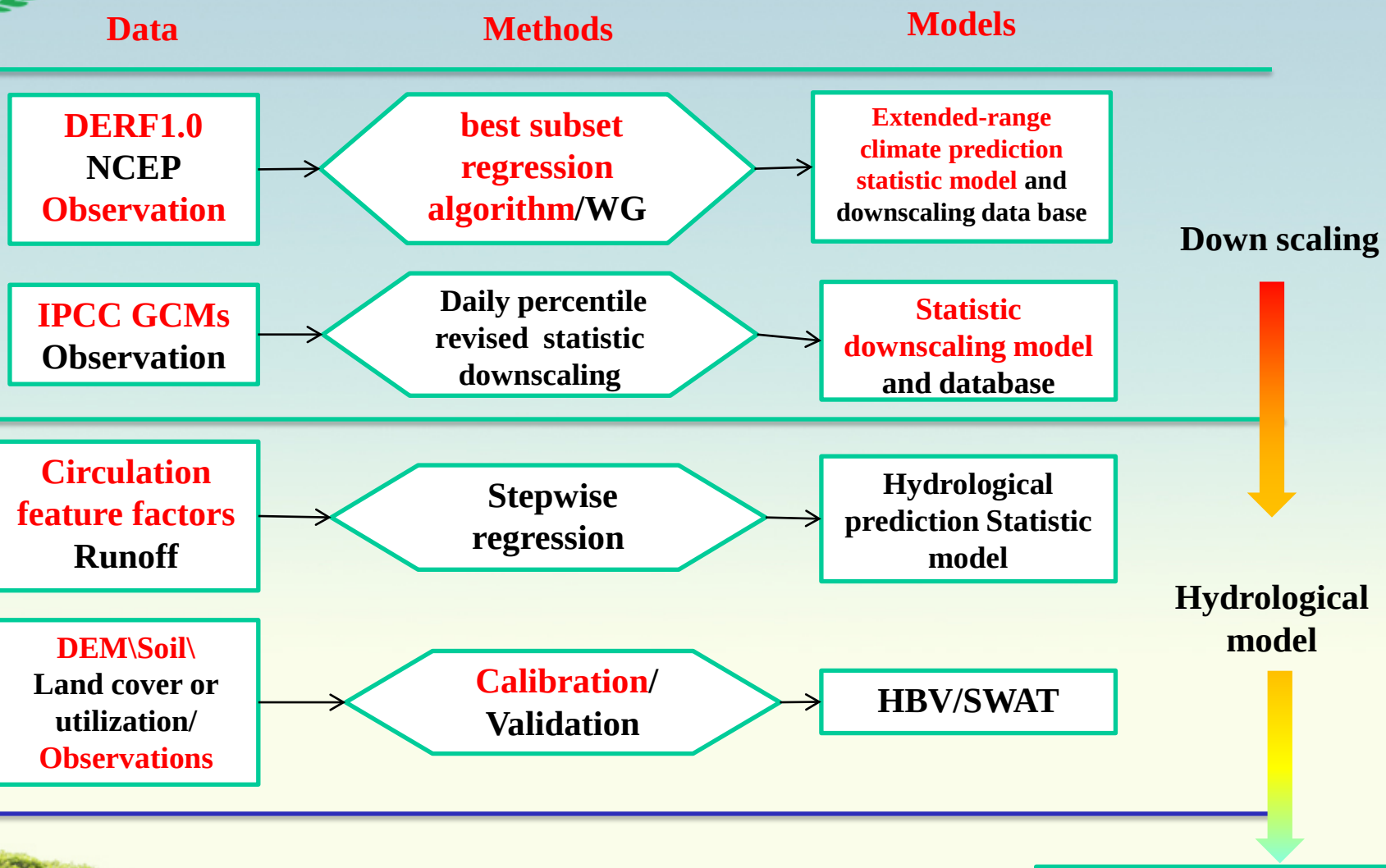
- To learn and investigate literatures about adaption to changes in water resources availability in China
  - Research progress and problems
  - Basic conception
  - Methods and indices
  - Case studies on vulnerability analysis and adapt to changes in water resources availability.

Case study: Evaluate to water resources vulnerability using SWAT-WEAP Model in Tributary of Xi liaohe River. （Hao and Wang ,2012)

Activity Three

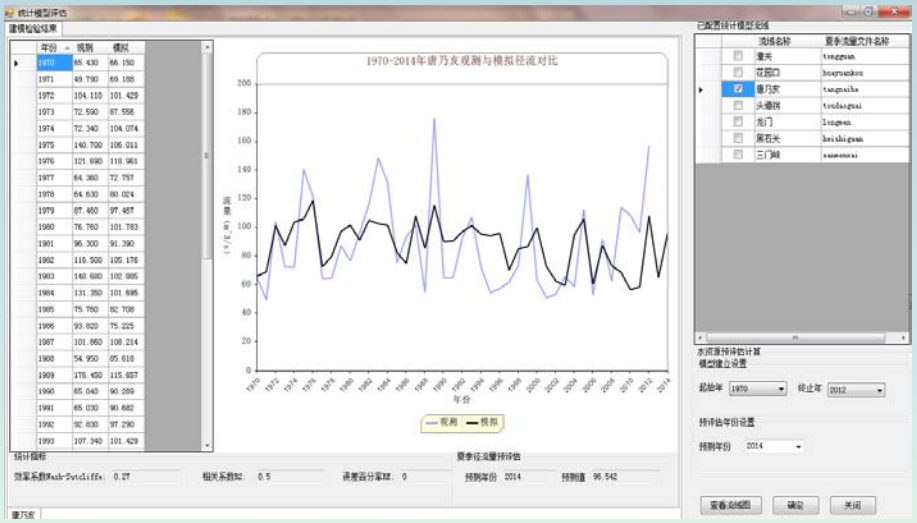
- Collected research achievements and practices on WRA linking to Climate prediction.
  - Case study: water resources pre-assessment based on the climate prediction on Yellow River Basin.

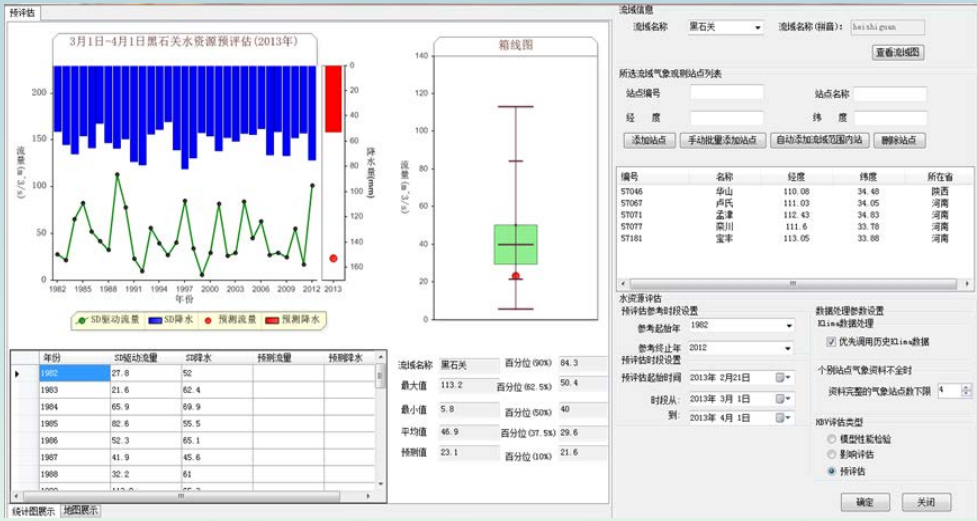
Water resource pre-assessment technical framework



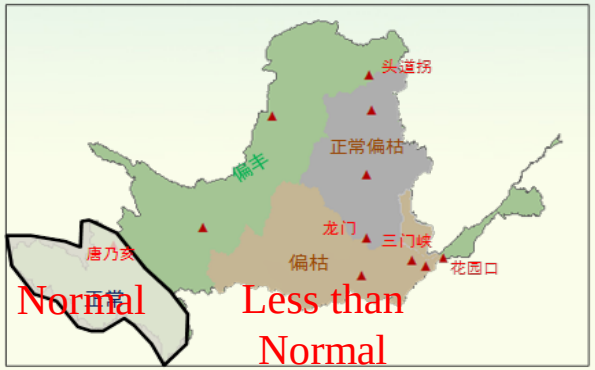
National Climate Center
Provided by Liu, LL

Water resource pre-assessment operational system

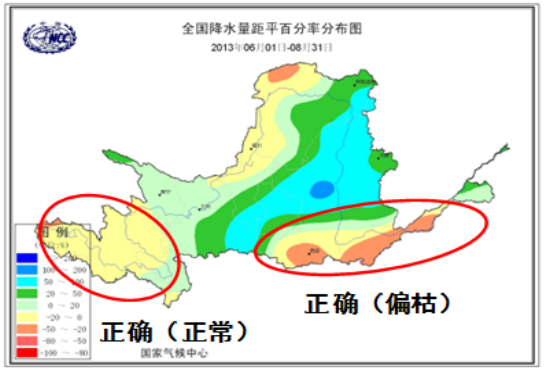




2013年汛期预评估



2013年汛期降水实况

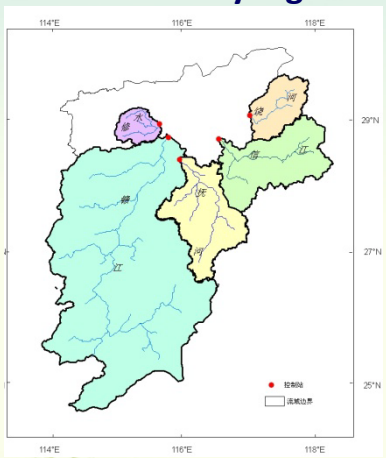


Water resource pre-assessment of flood season in 2013 in Yellow River Basin (predicted in April)

➢Multiple-hydrological models were set up in NCC at basin and national scale

VIC –National scale

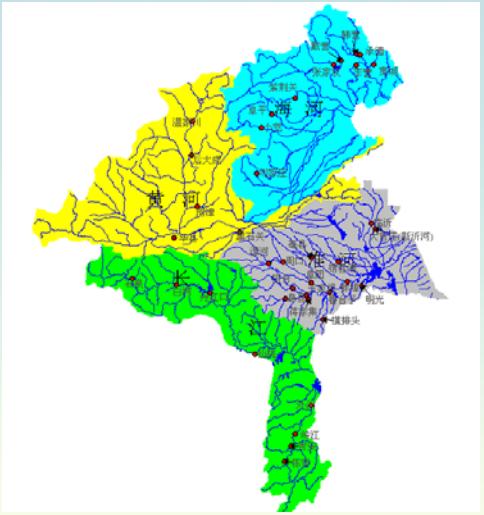
HBV model-Poyang Lake



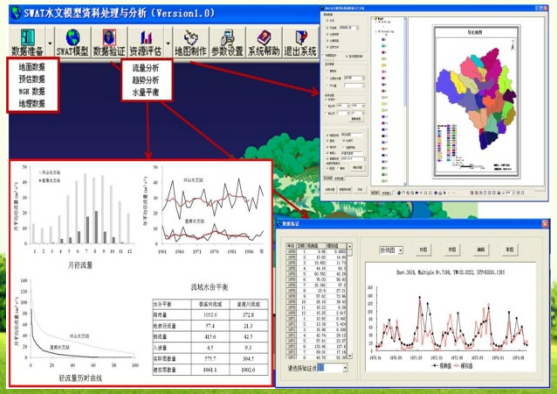
Hydrological modeling for different temporal-spatial scale

- VIC (Variable Infiltration Capacity)
- HBV Model
- Monthly Water Balance Model
- SWAT (Soil Water Assessment Tool)
- Floodarea Model

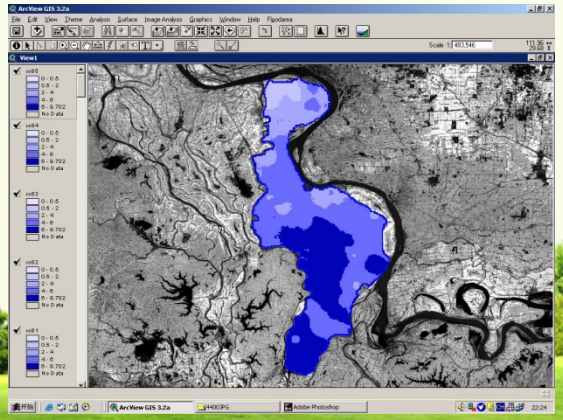
Monthly Water Balance Model - Four main river basin



SWAT: Key mesoscale watersheds



Floodarea model-delineation of flooded areas



Future plans

- Further discuss and prepare detail draft for guidance / report.
- Recommendation of experts are required.