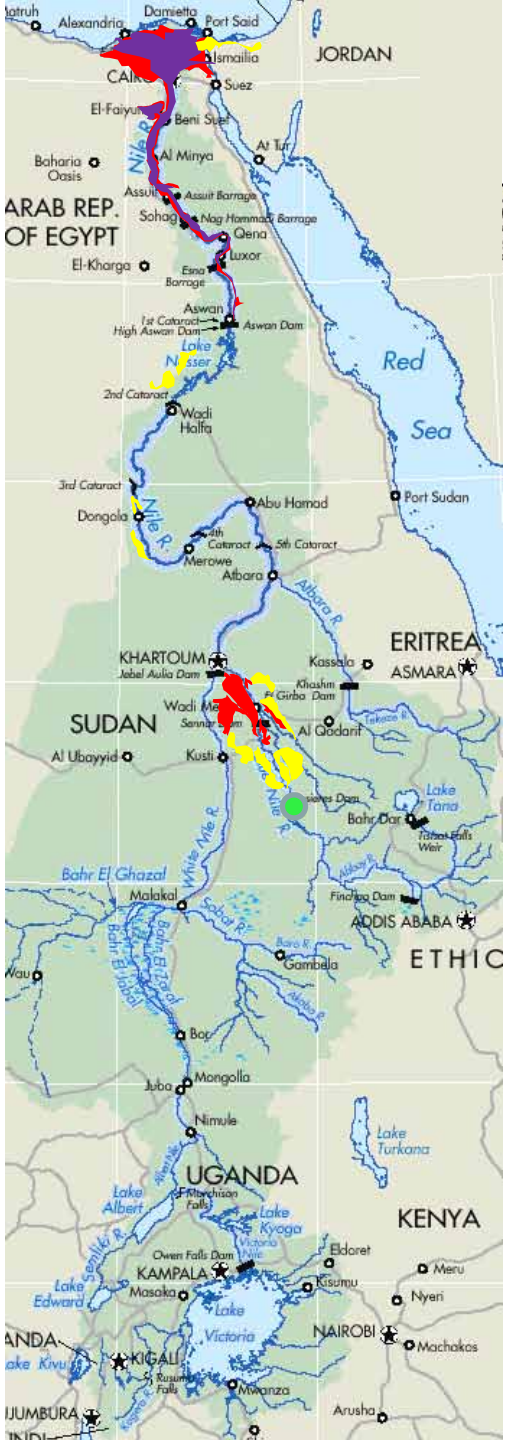

Exploiting the Nile waters 1902-2012

towards a new Nile agreement?

Hermen Smit
Pieter van der Zaag

Symposium "Waterconflicten en waterdiplomatie"

Stichting Nationaal Erfgoed Hotel De Wereld
Wageningen, 21 September 2012

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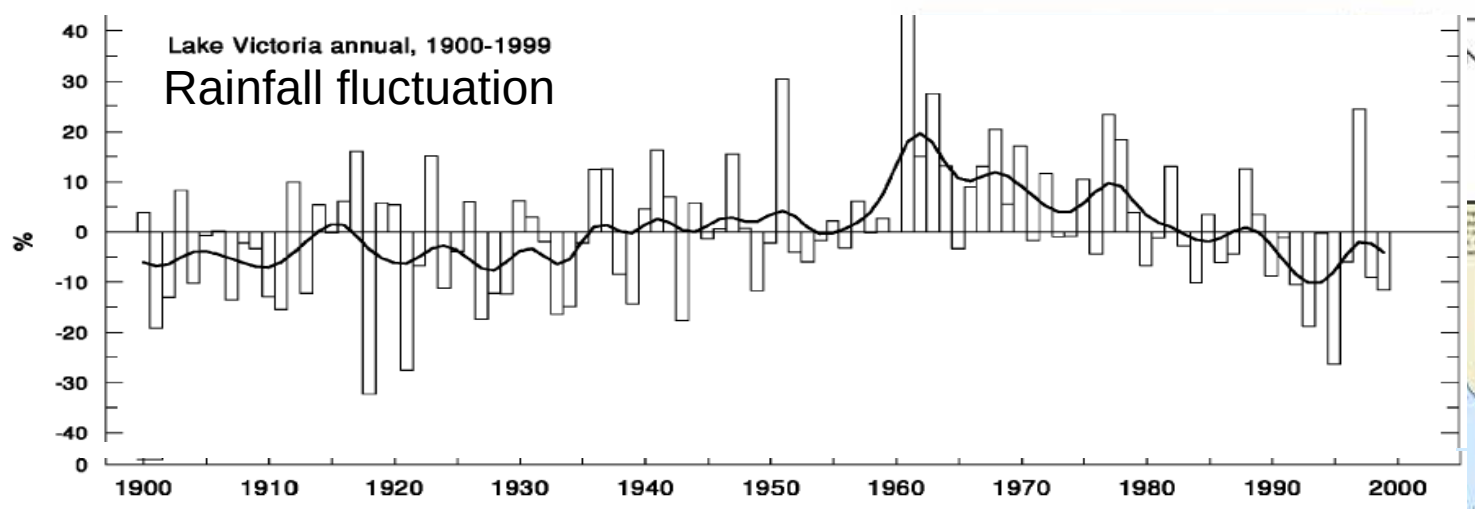

Conway, 2005

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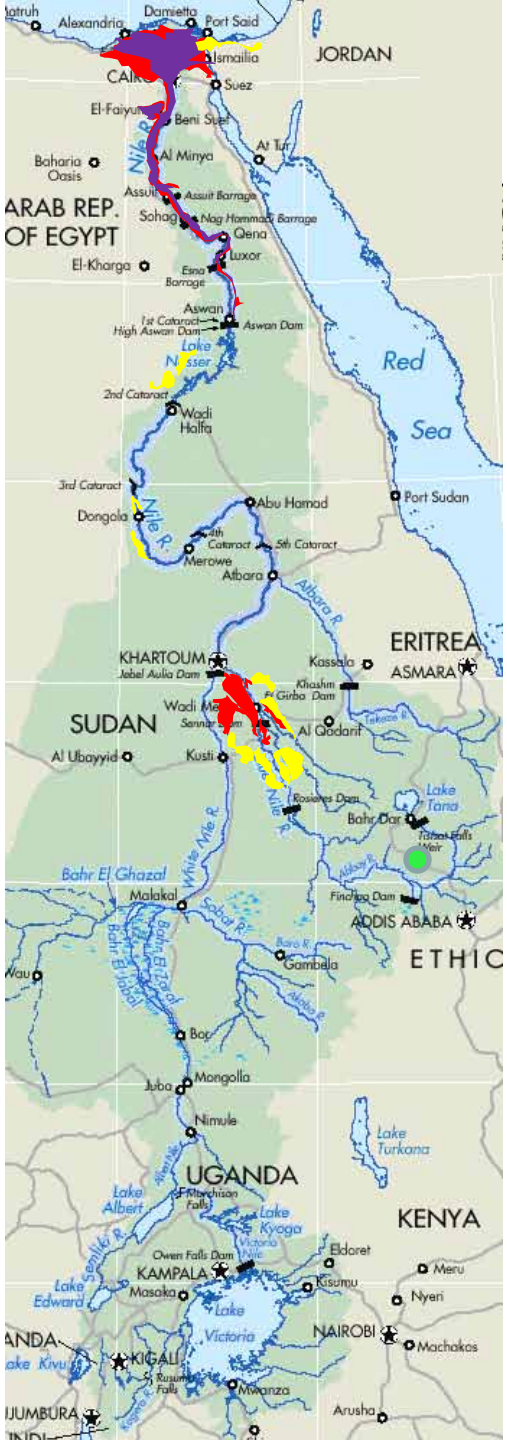
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Al Minya
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ARAB REP. OF EGYPT
Sohag
Nag Hammadi Barrage
Qena
El-Kharga
Luxor
Esna Barrage
Aswan
1st Cataract
High Aswan Dam
Aswan Dam
Lake Nasser
Red Sea
2nd Cataract
Wadi Halfa
3rd Cataract
Abu Hamad
Port Sudan
Dongola
4th Cataract
5th Cataract
Merowe
Atbara
Atbara R.
ERITREA
KHARTOUM
Jebel Aulia Dam
Kassala
ASMARA
Khashm el Girba Dam
Wadi Medani
Sennar Dam
SUDAN
Al Gadarif
Tekeze R.
Al Ubayyid
Kusti
Blue Nile R.
Roseires Dam
Lake Tana
Bahr Dar
Tisisat Falls
Weir
White Nile R.
Bahr El Ghazal
Malakal
Finchaa Dam
ADDIS ABABA
Sobat R.
Baro R.
Gambela
ETHIO
Wau
Bahr El Jebel
Bor
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Mongolla
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Lake Turkana
UGANDA
Lake Albert
Murchison Falls
Lake Kyoga
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KAMPALA
Meru
Kisumu
Masaka
Nyeri
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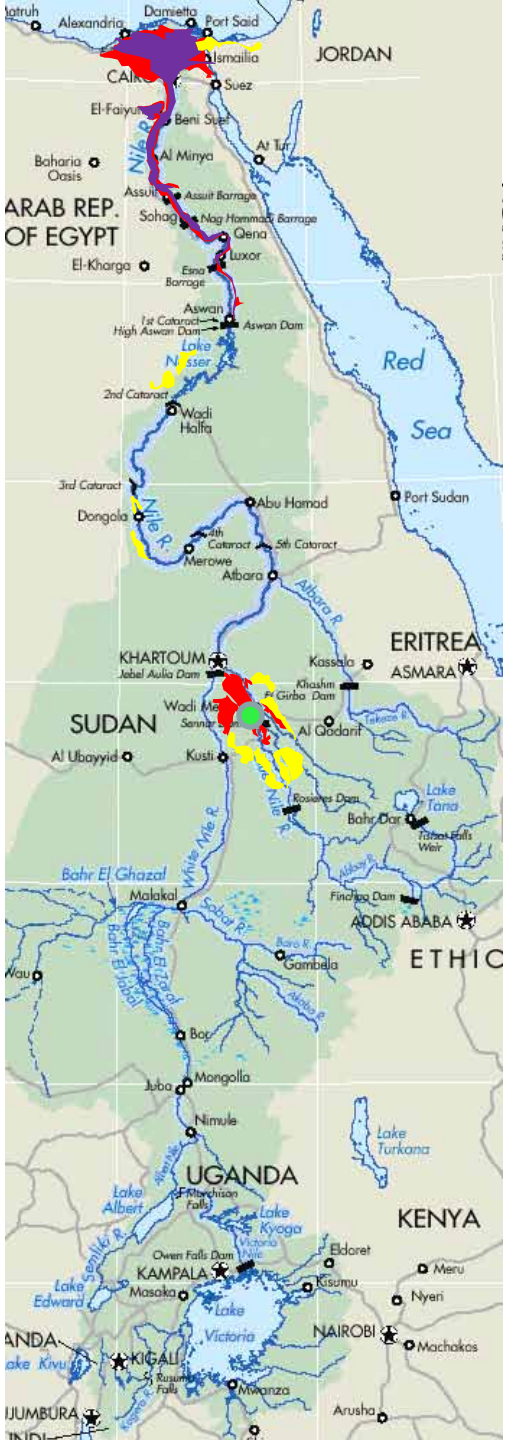
Lake Victoria
NAIROBI
Machakos
KIGALI
Rusumo Falls
Mwanza
Arusha
BUJUMBURA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KIGALI
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Mwanza
Arusha
BUJUMBURA

1902

Old Aswan Dam

Storage capacity: 1BCM
(heightened 1912, 1934 5 BCM)
Residence time: < 1 week
Financed: British

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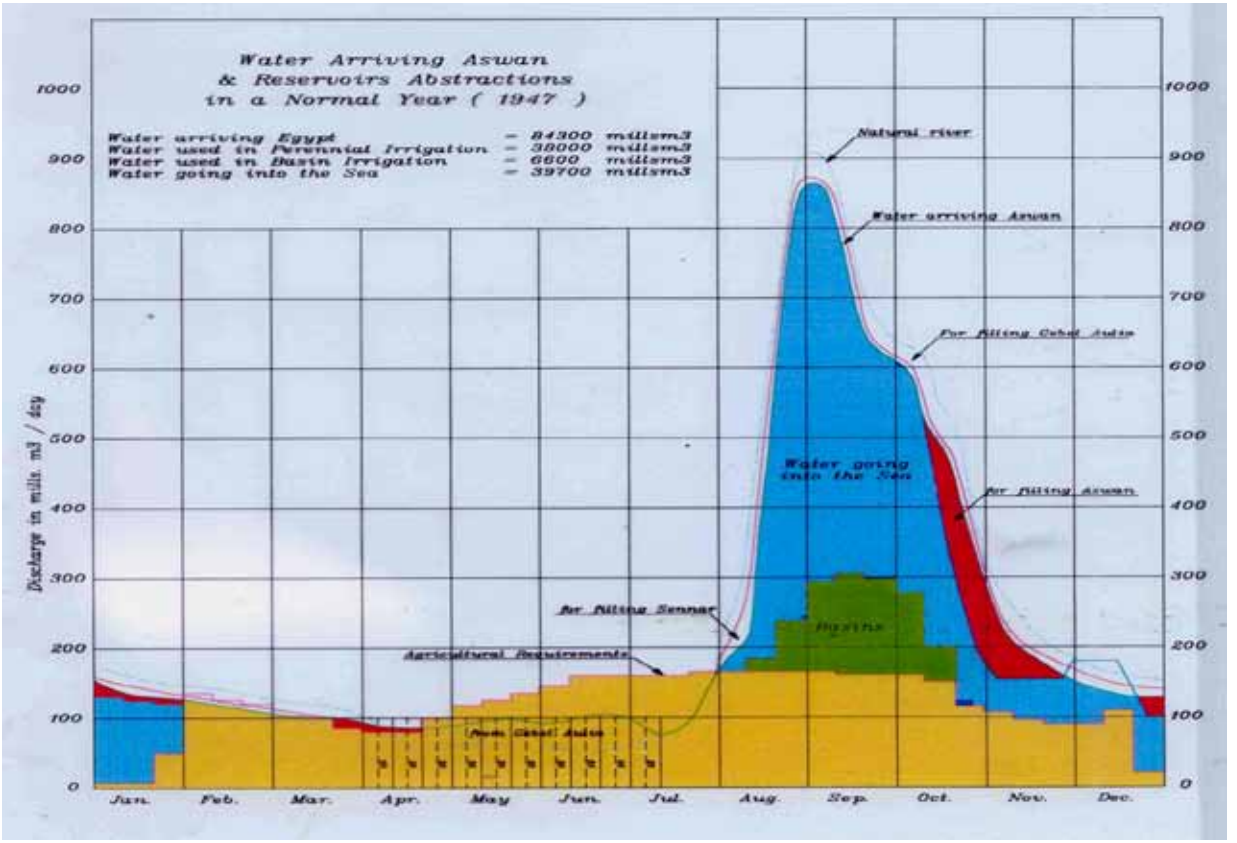
1902

Old Aswan Dam



MIWR, 2006

Storage capacity: 1BCM
(heightened 1912, 1934 5 BCM)
Residence time: < 1 week
Financed: British

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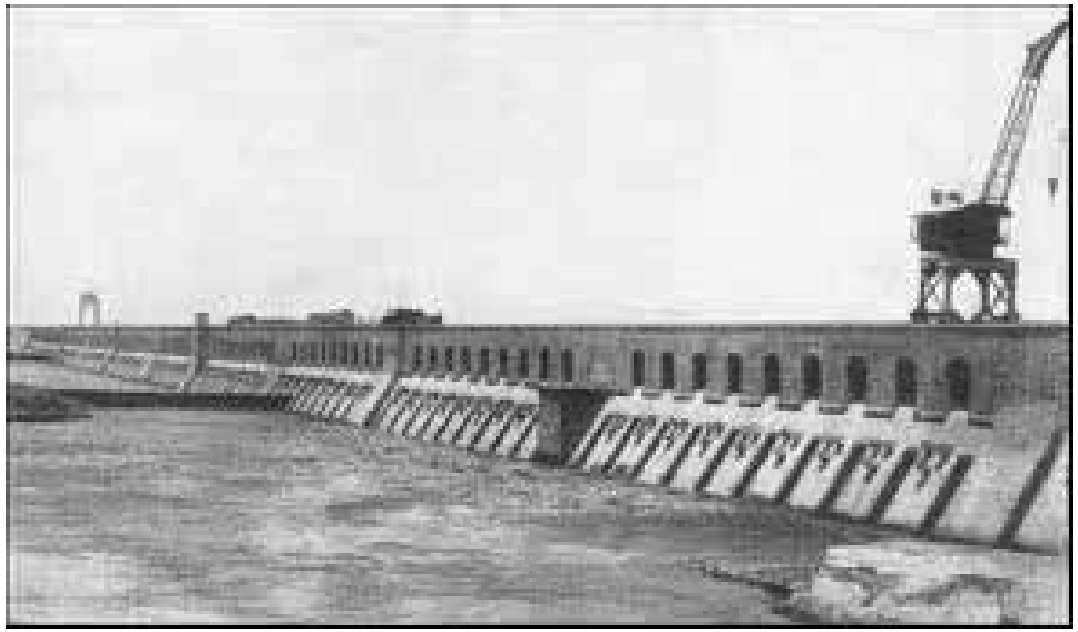
1925

Sennar Dam



Storage capacity: 1 BCM
Finance: British
Irrigation: 450 000 ha

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1929 - 1959

1922 Independence Egypt

1929 Agreement Egypt – “Sudan”

Sudan	2.7 BCM/ year
ONLY between	15 July and 31 Dec

1949 Agreement Egypt – “Uganda”

1956 Independence Sudan

1959 Agreement Egypt – Sudan

Full utilization after High Aswan Dam and Roseires Dam

Egypt	55.5 BCM/ year
Sudan	18.5 BCM/year
Evaporation	10 BCM/Year

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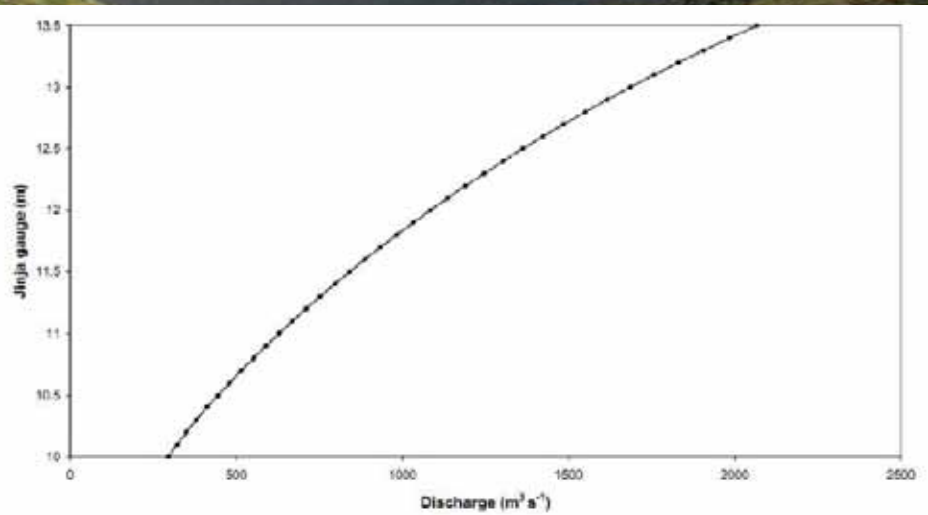
1954

Owen Falls (Nalubaale) Dam



r 19th 2006

(Sutcliffe and Petersen, 2007)

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1966

Roseires Dam

Storage capacity:	3 BCM
Finance:	Arab Fund, Germany,
Power:	280 MW
Irrigation	650 000 ha

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1970

High Aswan Dam

Storage capacity:	168 BCM
Residence time:	2 years
Finance:	Russia, Egypt
Control:	over year storage
Irrigation:	add 1 million ha
Power:	2100 MW

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1970

High Aswan Dam

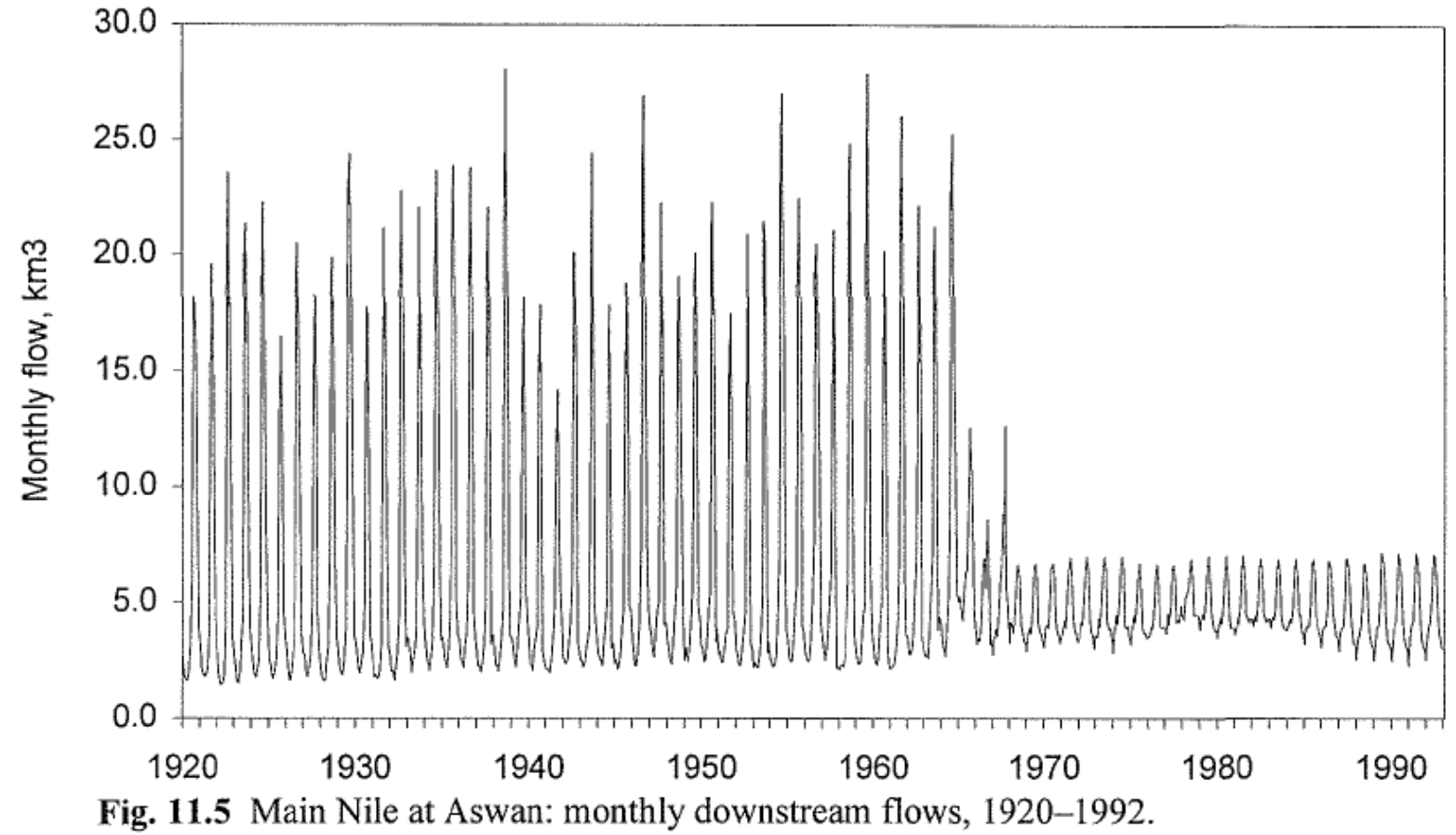

Fig. 11.5 Main Nile at Aswan: monthly downstream flows, 1920–1992.

(Sutcliffe et al., 1999)

1995

1967 Hydromet

1983 Undugu

1992 Tecconile – Ethiopia participates (observer)

1995 Nile River Basin Action Plan

1997 Approved by donors (WB, CIDA, UNDP)

Two ‘separate’ parallel processes:

1997 start negotiations Cooperative Framework Agreement

1999 Nile Basin Initiative (NBI)

- Shared Vision Program
- Subsidiary Action Program
- “carrots” of USD 100 million for planning
- further donor funding possible if all countries agree

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1997

PLAN Toshka and Al Salam projects

Finance:	private inv./Egypt
Function:	irrigation
Planned:	350 000 ha
Implemented:	50 000 ha

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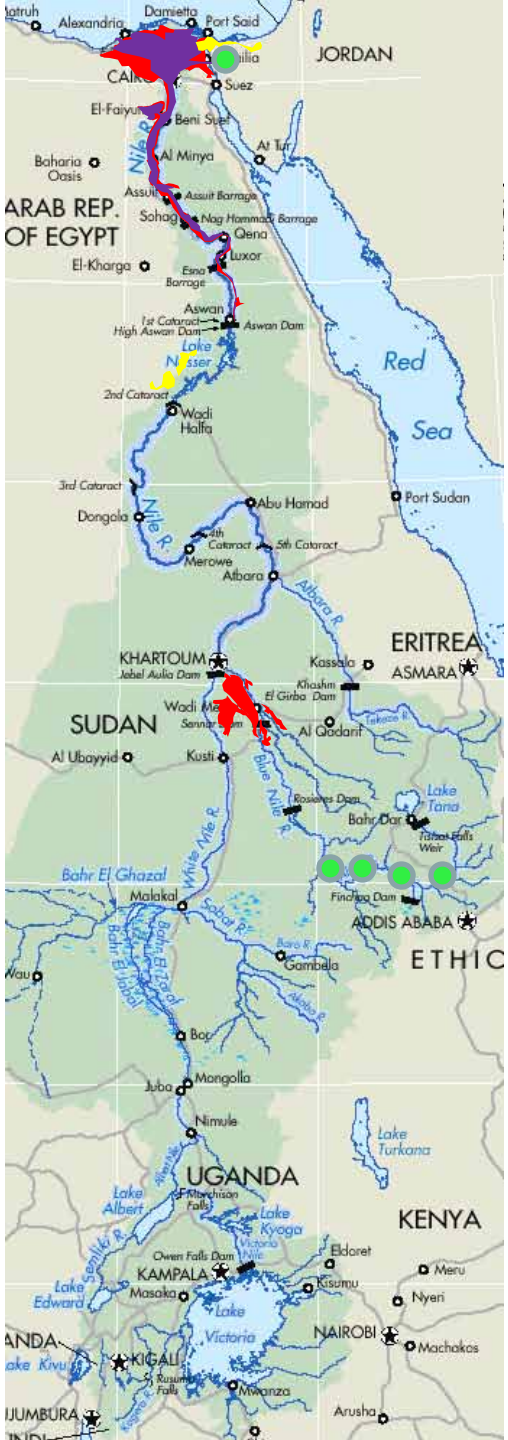
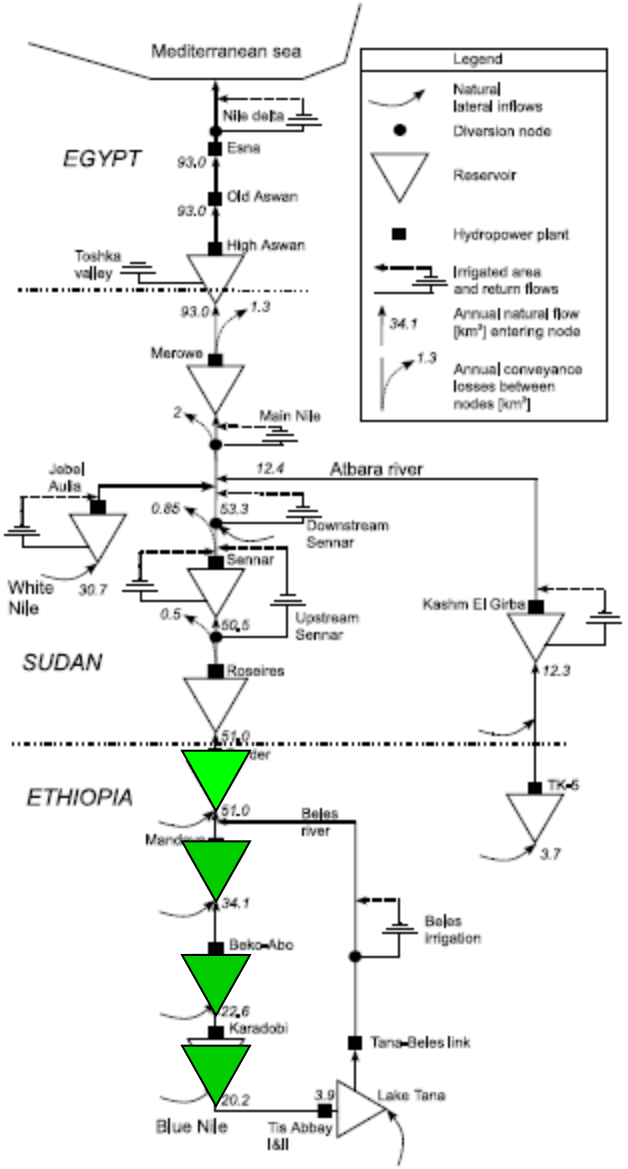
2000



Cascade of Ethiopian dams



Source: Goor et al., 2010

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2002

NASA 2002 – Between 1998 and 2002 40 BCM water was spilled into the Toshka depression

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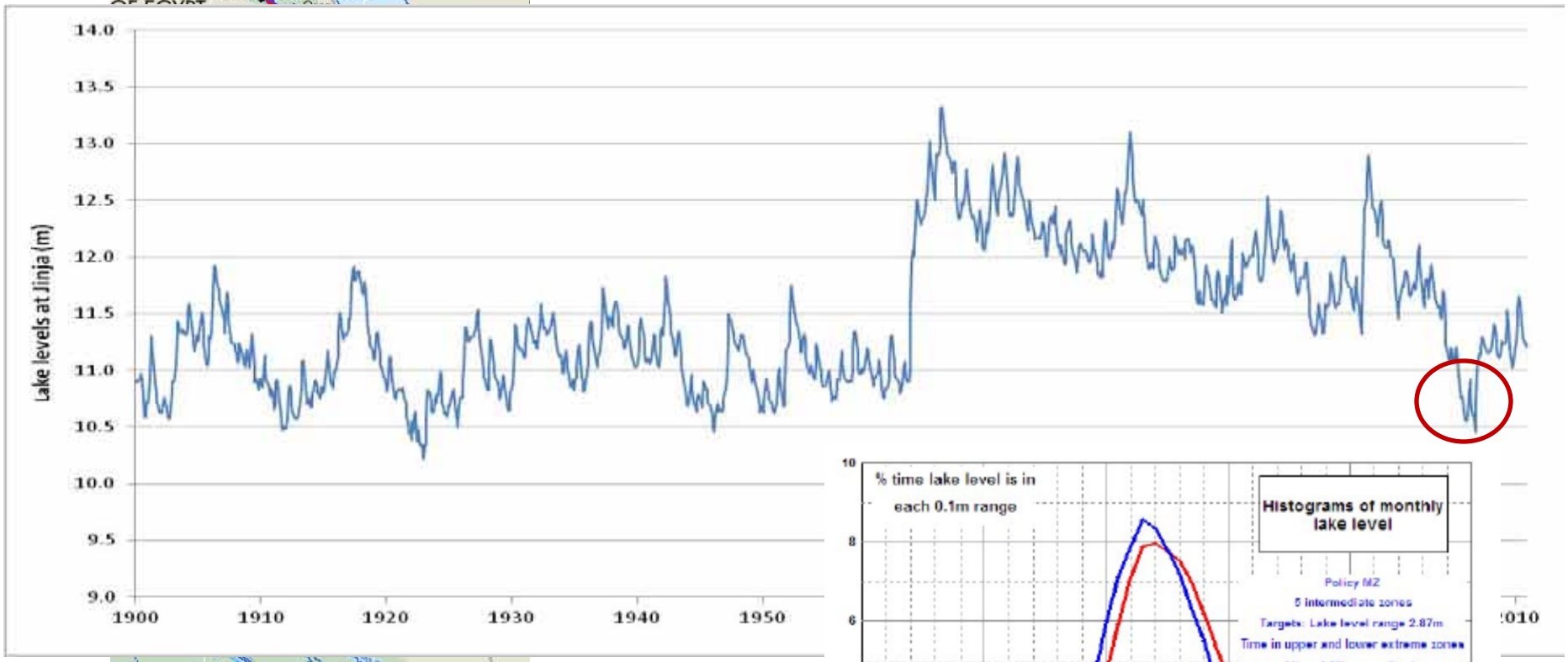
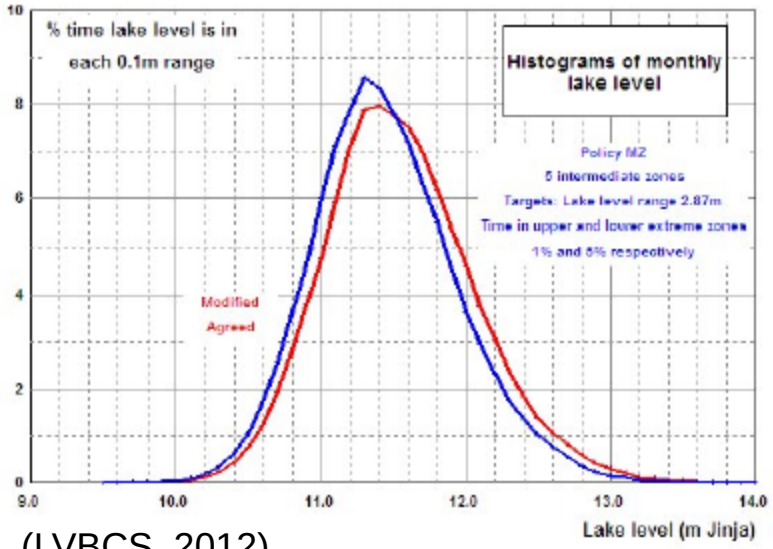
2006

Lake Victoria water levels



(Source: Lake Victoria



(LVBCS, 2012)

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2009

Merawi Dam

Storage capacity:	12.5 BCM
Finance:	China/ Sudan
Power:	1250 MW
Irrigation (**planned)**	350 000 ha

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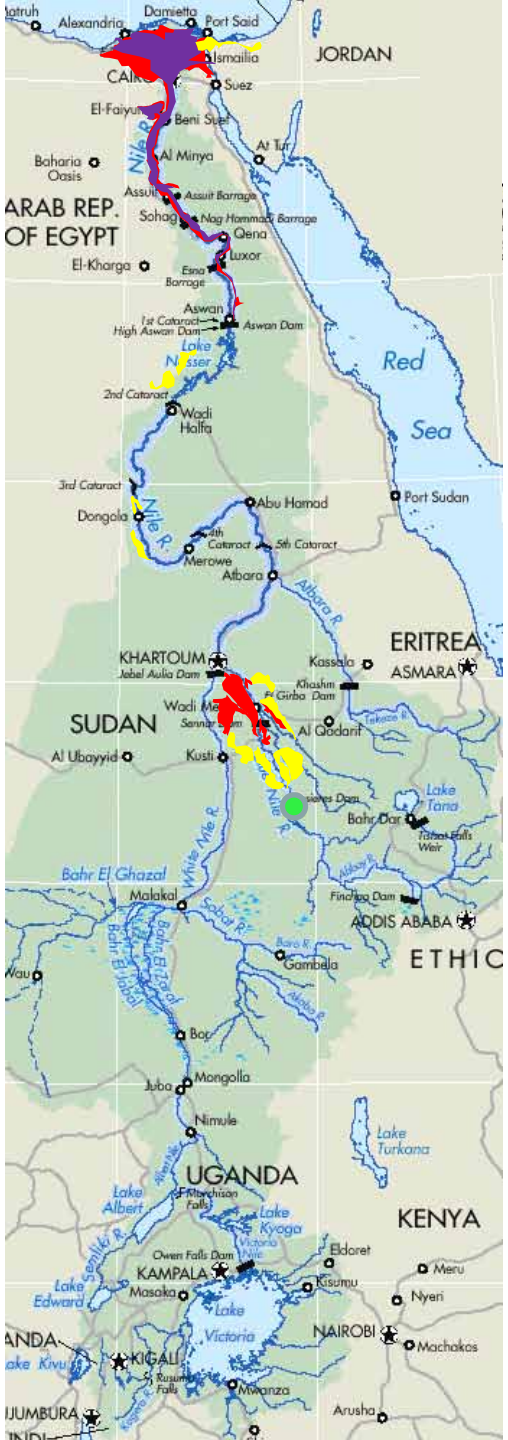
2010



Roseires Dam - Heightening

Reservoir	7.4 BCM
Finance:	China/Sudan
Power	280 MW (+40%)
Irrigation:	+650 000 ha

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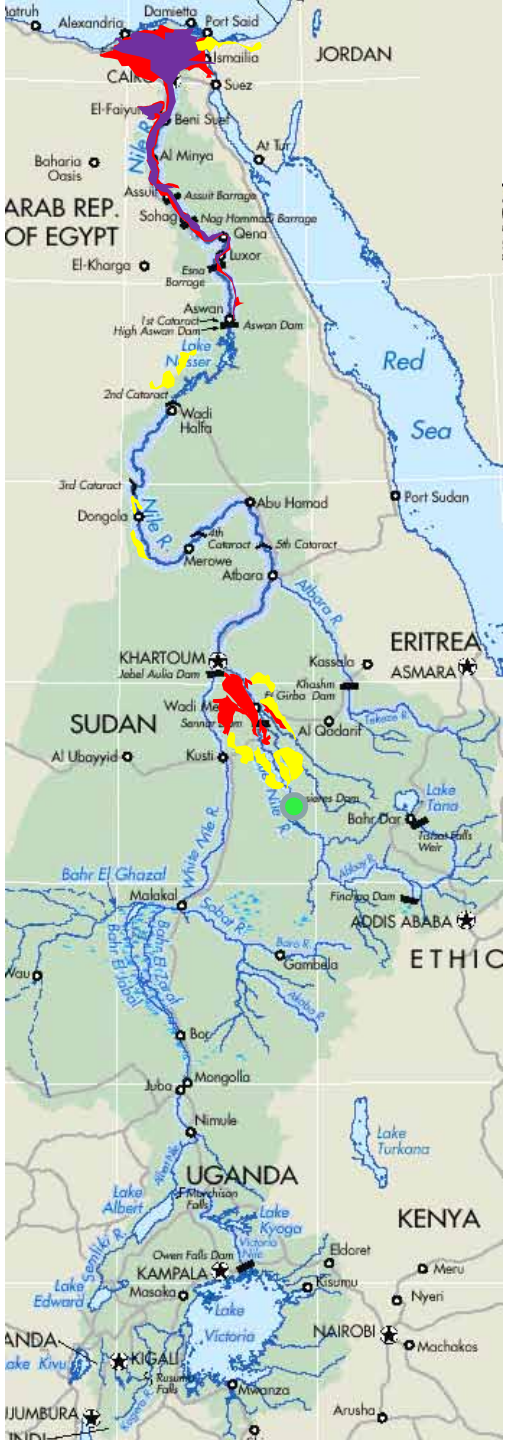
2010



2007 Negotiations Cooperative Framework Agreement (CFA) end

Deadlock:

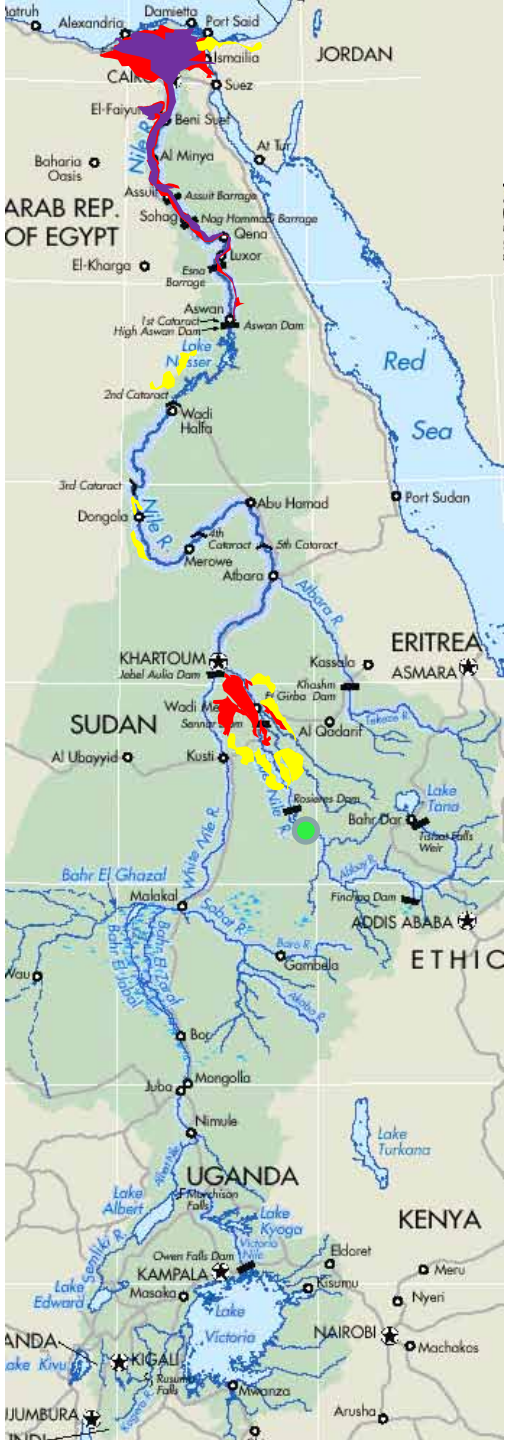
- Downstream countries want existing treaties recognized
- World Bank pushes for ‘inclusive signing’ of CFA
- Unilateral developments continue

2010 Ethiopia, Kenya, Rwanda, Uganda and Tanzania sign CFA

2010 Sudan and Egypt ‘freeze’ NBI cooperation

2011 Burundi signs CFA (6th signature required for CFA to come into force)

2011



2011 announcement
Grand Ethiopian Renaissance dam

Storage capacity:	63 BCM
Residence time:	> 1 year
Finance:	Ethiopia
Function:	5250 MW
Planned:	0 ha????

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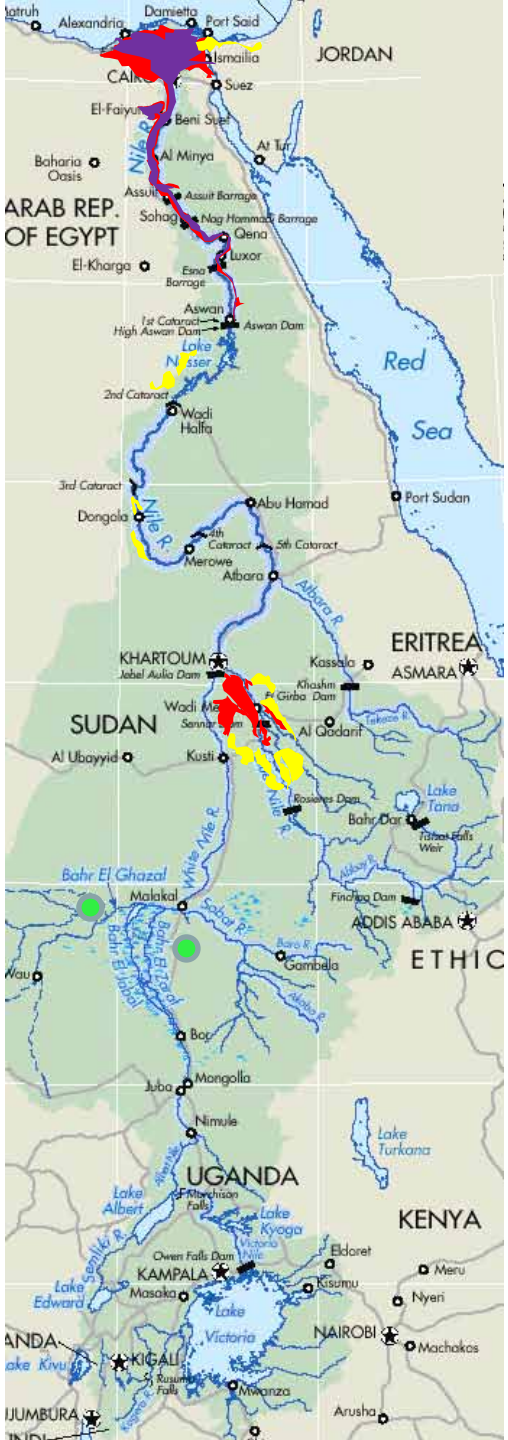
2011



South Sudan

New irrigation	?? ha
Draining The Sudd?	+10 BCM/yr
Draining Bahr al Gazal?	+? BCM/yr

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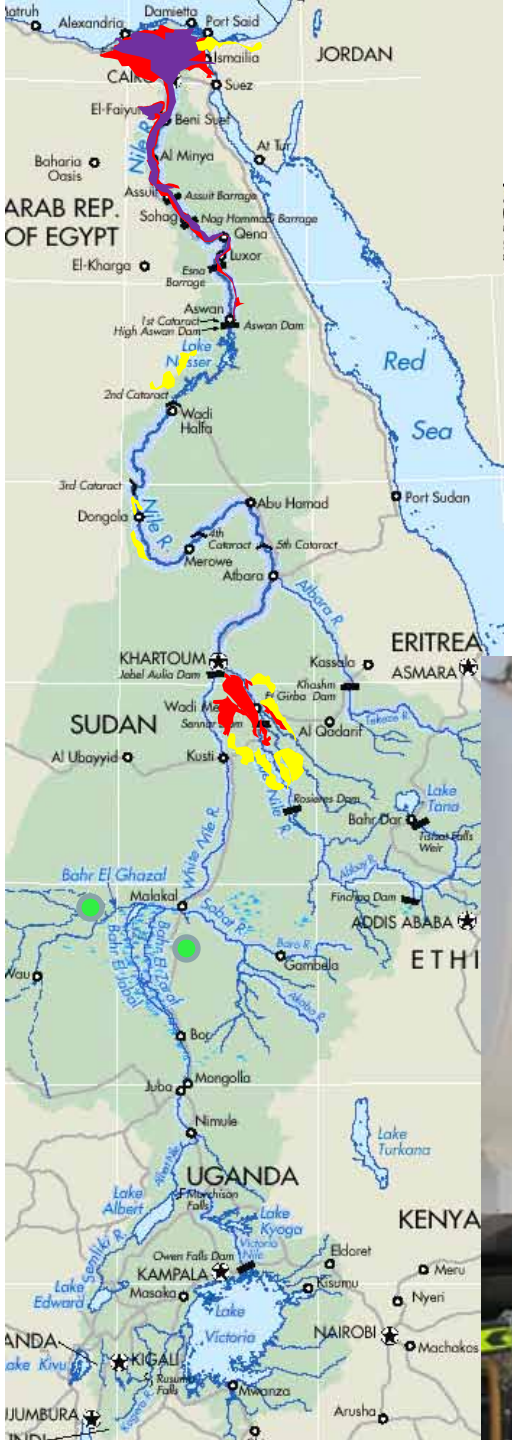
2012

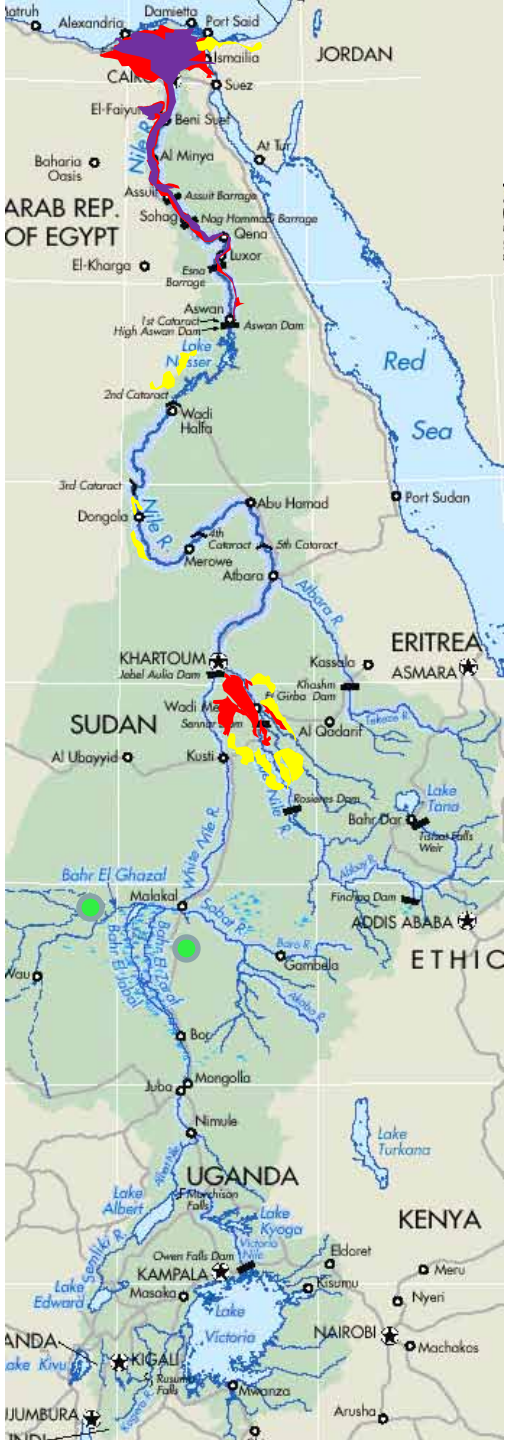


Future of Nile Basin Initiative uncertain

Negotiations between Egypt, Sudan and Ethiopia on-going:

- International panel of experts assess the impact of Grand Ethiopian Renaissance Dam
  - 6 from Egypt (2), Sudan (2) and Ethiopia (2)
  - 4 international experts (UK, France, Germany, South Africa)

Photo: Hermen Smit



Concluding remarks (1)

(1) Developments external to the water sector have changed the status quo:
- Upstream countries no longer rely on World Bank and western donors
- Upstream countries proceeded with signing the CFA in the absence of consensus
- The Arabic spring in Egypt

(2) Surprisingly a new understanding is emerging between Ethiopia, Sudan and Egypt

(3) Large uncertainties remain:
- South Sudan and Sudan (what Nile waters will South Sudan claim and contribute?)
- The succession of power in Ethiopia
- The outcome of the political process in Egypt

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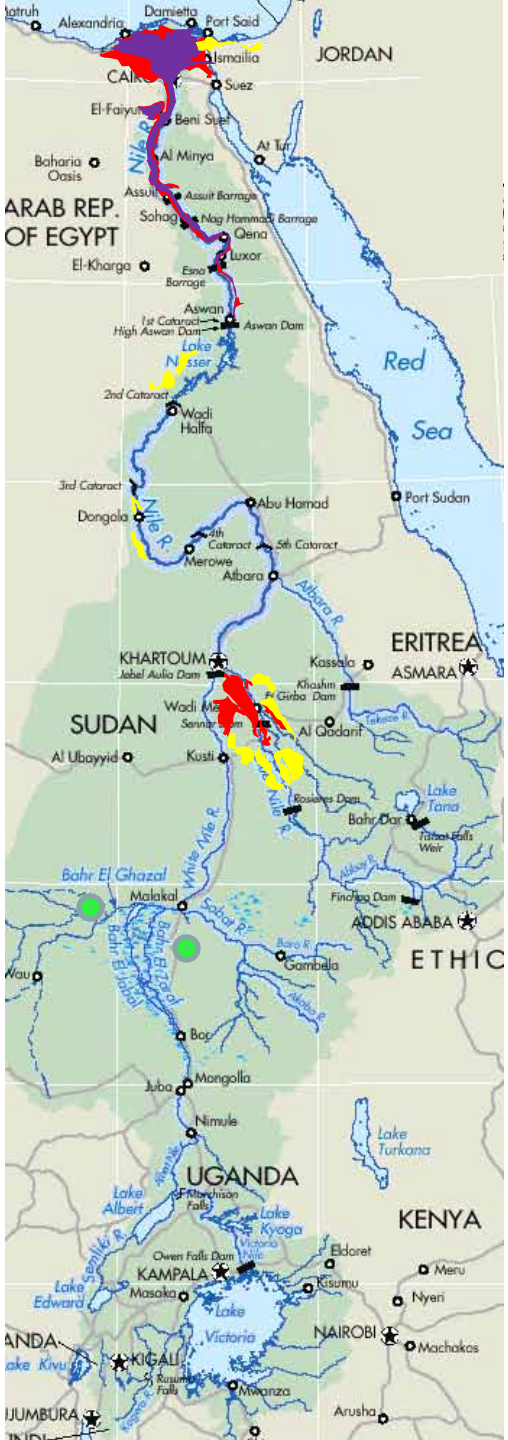
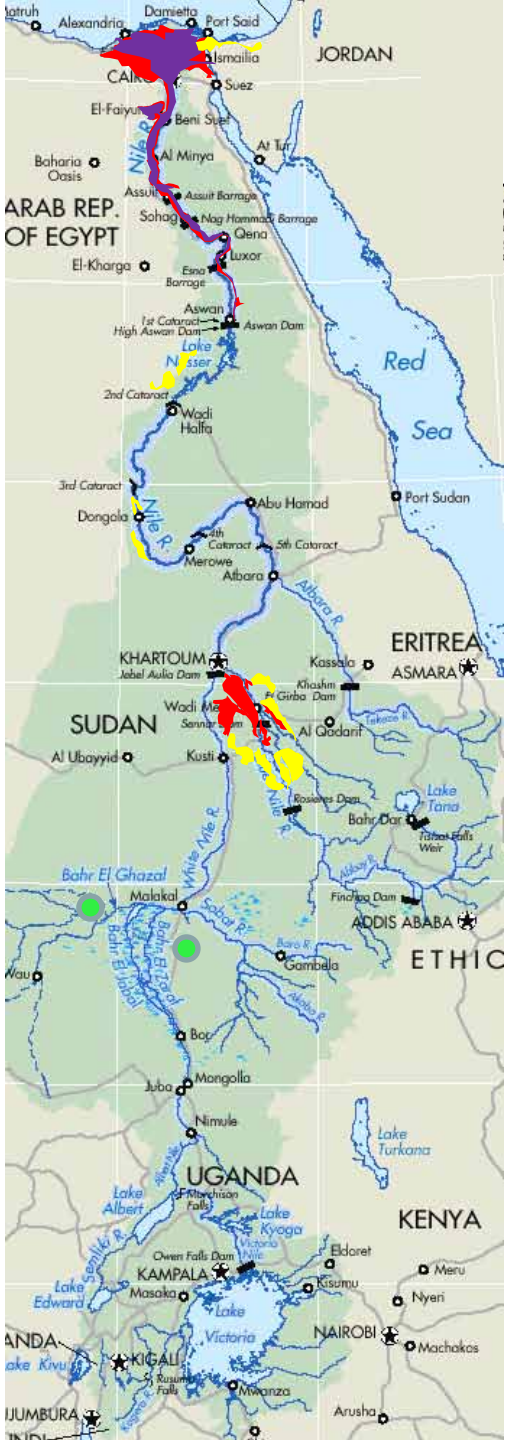


Concluding remarks (2)

(4) Historical developments in the Nile have been driven by a combination of:
- (Geo-)political opportunities
- Infrastructure developments (and financing)
- Climate shocks

(5) High hopes created by NBI have not come true
- can external players trigger countries into cooperation?
- a new platform has to be created by the riparian countries themselves

(6) What have theories on water security, water cooperation and water hegemony (viz. Warner's (2012) three lenses) contributed to understanding the Nile dynamics?



Concluding remarks (3)

(7) In the mean time local people keep on muddling through…, upstream and downstream

Hermen Smit (h.smit@unesco-ihe.org)
Pieter van der Zaag (p.vanderzaag@unesco-ihe.org)

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