

IWAS

Brazil

ÁGUA-DF



IWAS/ÁGUA-DF – an IWRM approach for Central Brazil

 TECHNISCHE
UNIVERSITÄT
DRESDEN

 HELMHOLTZ
ZENTRUM FÜR
UMWELTOFFSUCHUNG
UFZ

 caesb

Funded by



Bundesministerium
für Bildung
und Forschung

 sachsenWasser

 KIT
Karlsruhe Institute of Technology

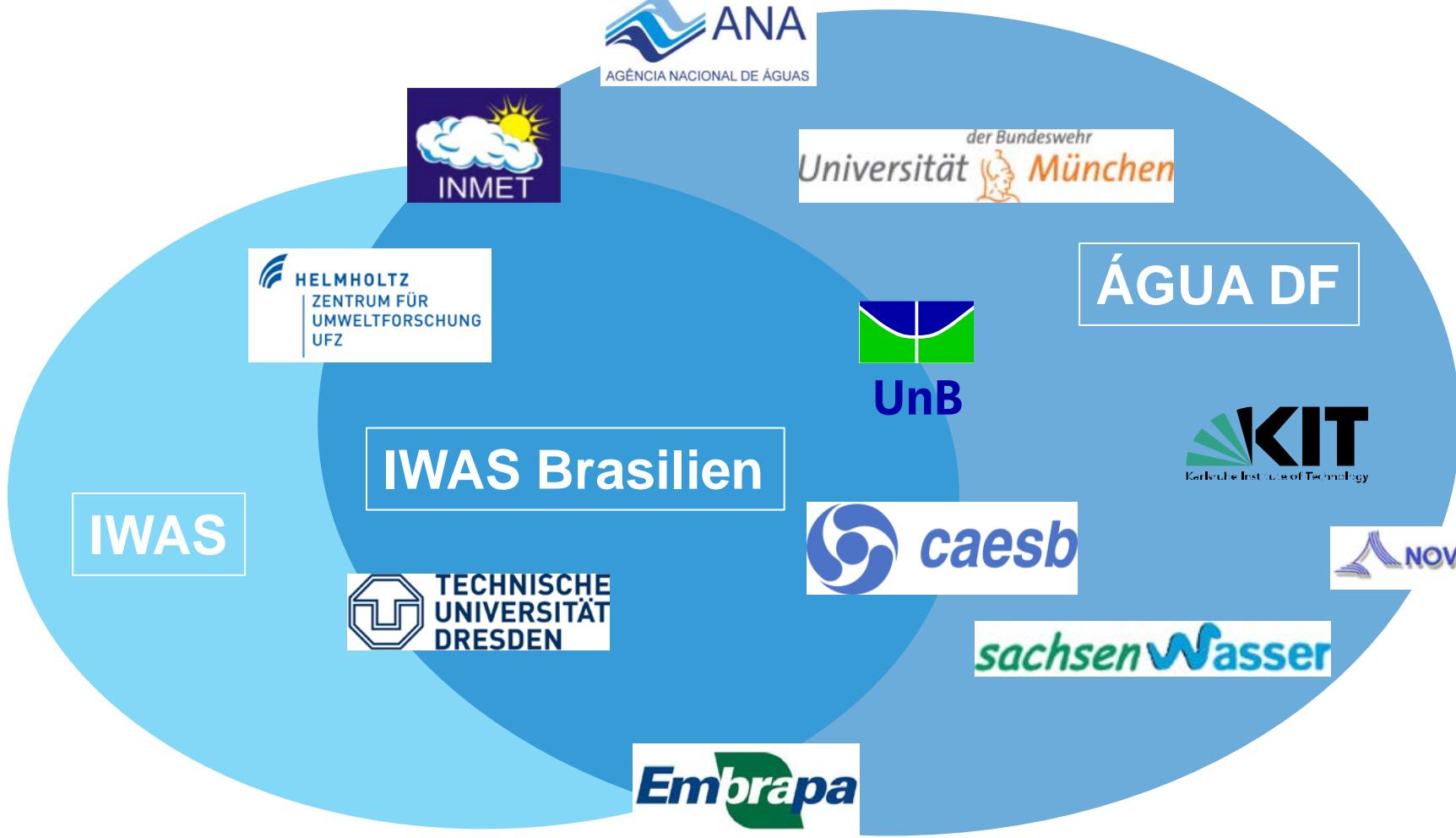
 der Bundeswehr
Universität München

 INMET

 NOVACAP

 Embrapa

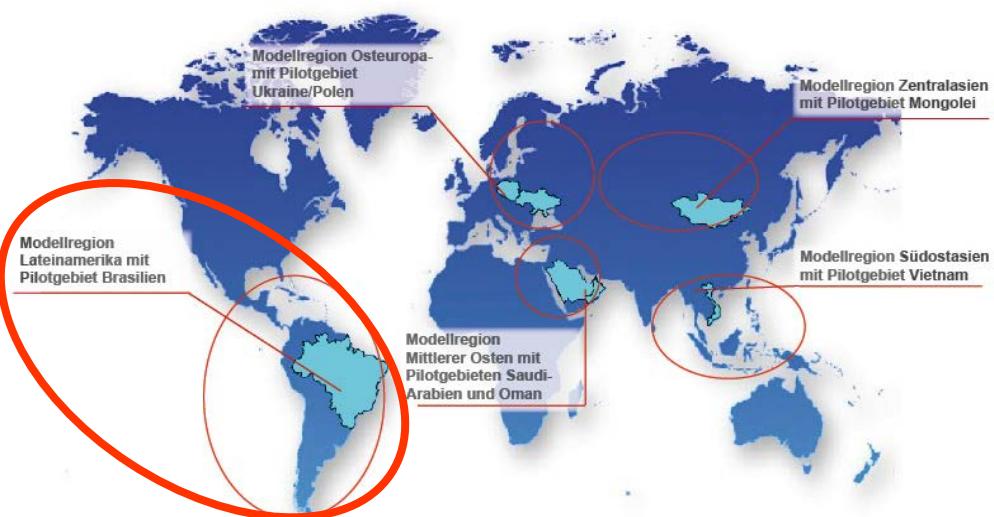
Patrocinado
por



Consortium IWAS/ÁGUA-DF

IWAS objective:

Sustainable management of water resources in hydrologically sensitive regions threatened by increasing human activity and climate change



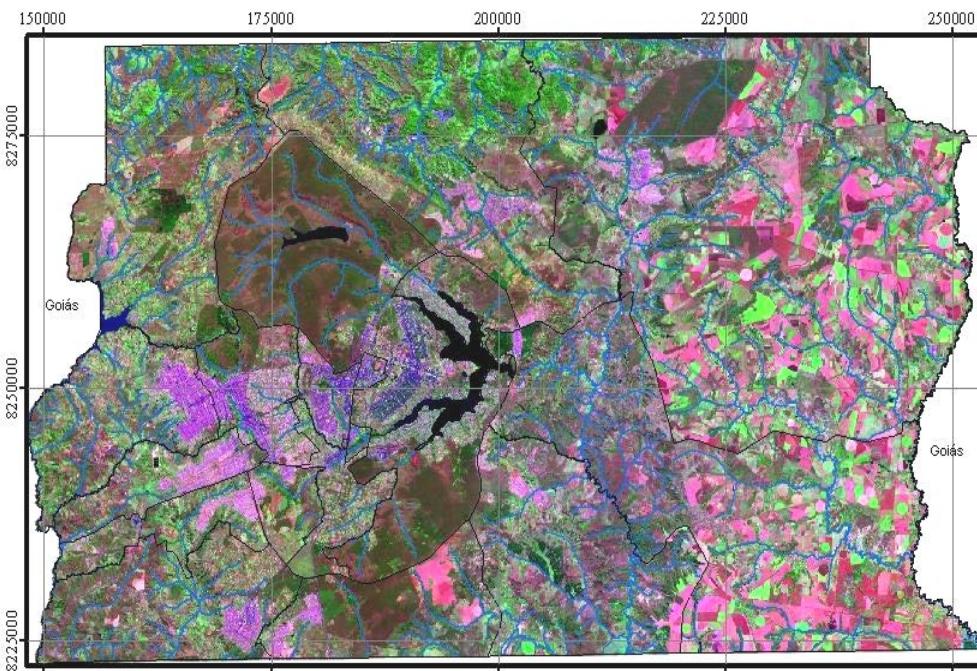
Regional Project Latin America: Brasília/DF



Focus region: Metropolitan area of Brasília

Objectives

- **System analysis:** available water resources, patterns of water use, infrastructures, risk potential
- **Prognoses** of the development of the water supply situation (influences: decrease in precipitation, population growth, urbanization, intense agricultural activity)
- Introducing **innovative technologies** (waste and drinking water treatments)
- Development of new use **concepts and management strategies** in cooperation with local decision makers and water supplier



Drivers

Climate Change
UFZ/TUD-M/INMET

Population growth
UFZ/UnB-G

Land use change
TUD-B/UnB-G/EMBRAPA

Policies/economy
CAESB

Driver

pressure

State

impact

reaction

Waste Water
CAESB/UBW/KIT/TUD-S

Catchment(s)
TUD-B/CAESB/UFZ/UnB-E

Water quality
TUD-W/KIT/UBW/CAESB

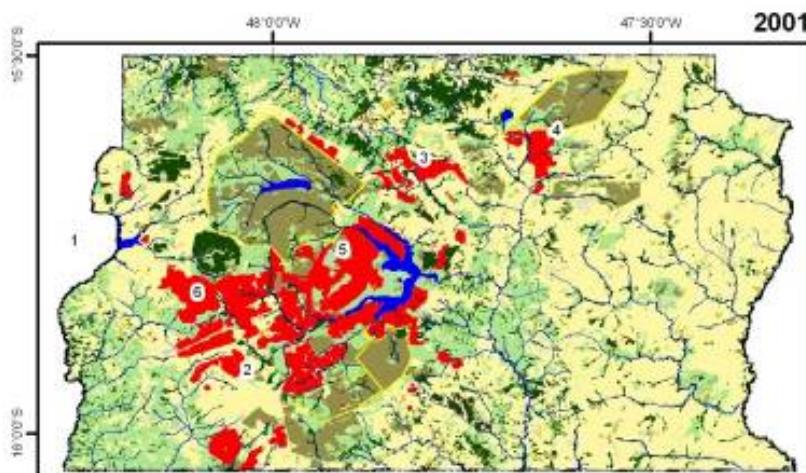
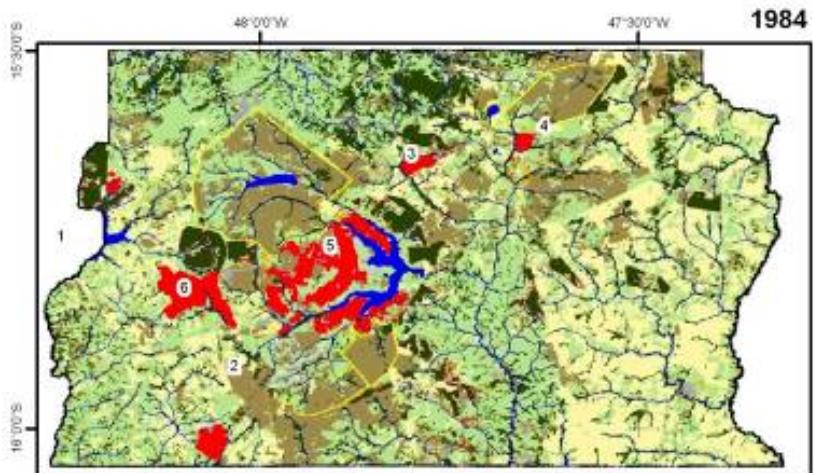
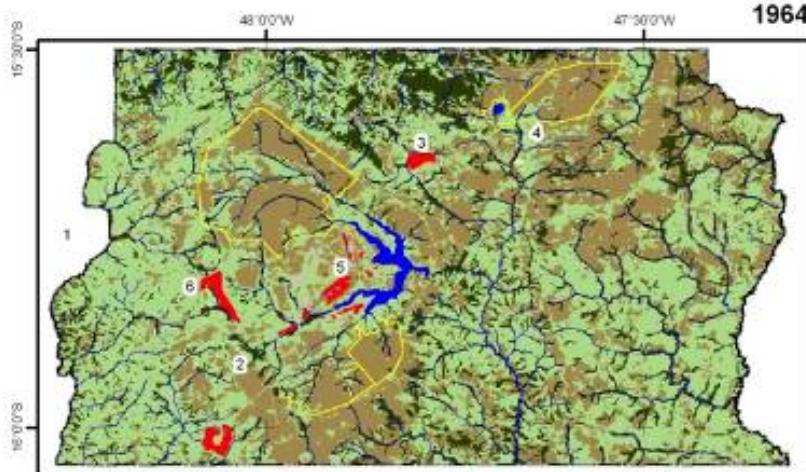
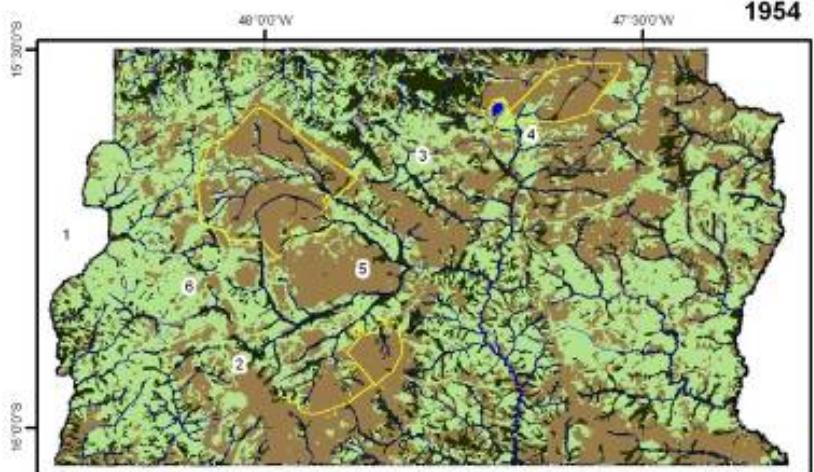
Water Balance
TUD-B/UFZ/CAESB

Sediments
TUD-B/UFZ/KIT/UnB-G, -E/CAESB

Water Supply Security
Evaluation & Recommendation
TUD-B/UFZ/CAESB/UnB-G

Drinking Water
TUD-S/CAESB





DF - Distrito Federal, RJ - Rio de Janeiro City

Legend - Land Use

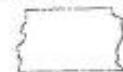
- Urban area
Agricultural area
Bare soil

- The legend consists of four colored squares with corresponding labels: a light green square for 'Grass land', a brownish-green square for 'Cerrado (savanna)', a dark green square for 'Forest', and a blue square for 'Lakes, reservoirs and rivers'.

Urban area growth

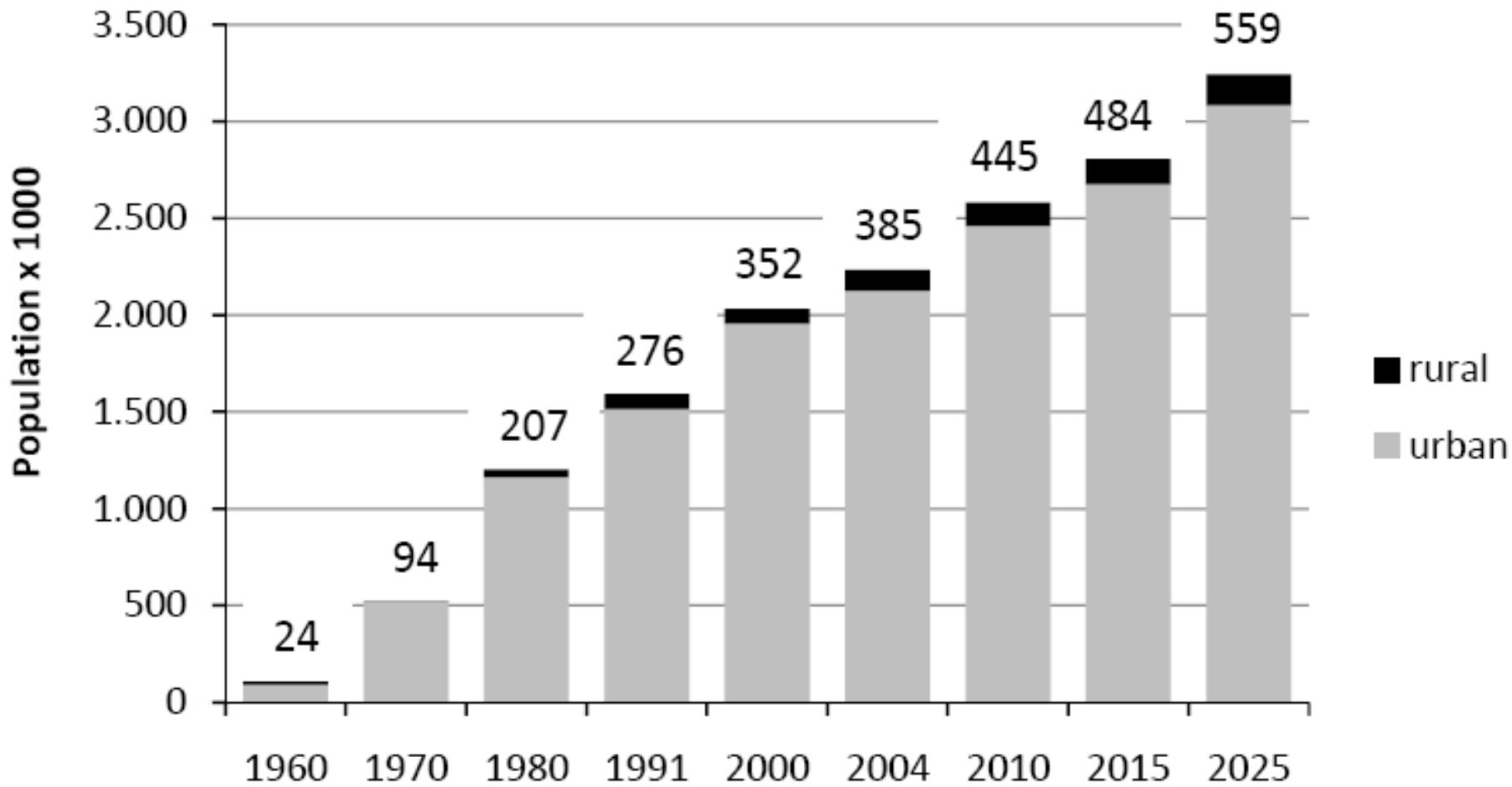
- 1 - Aguas Lindas de Goias
- 2 - Riacho Fundo
- 3 - Sobradinho
- 4 - Planaltina
- 5 - Brasília
- 6 - Ceilândia

Distrito Federal - DF





Urban sprawl
(satellite city Samambaia)



Historic and predicted population of the DF from 1960 to 2025; numbers above columns are population density (inhabitants per km²) (PGIRH 2006)

Agriculture and landuse change



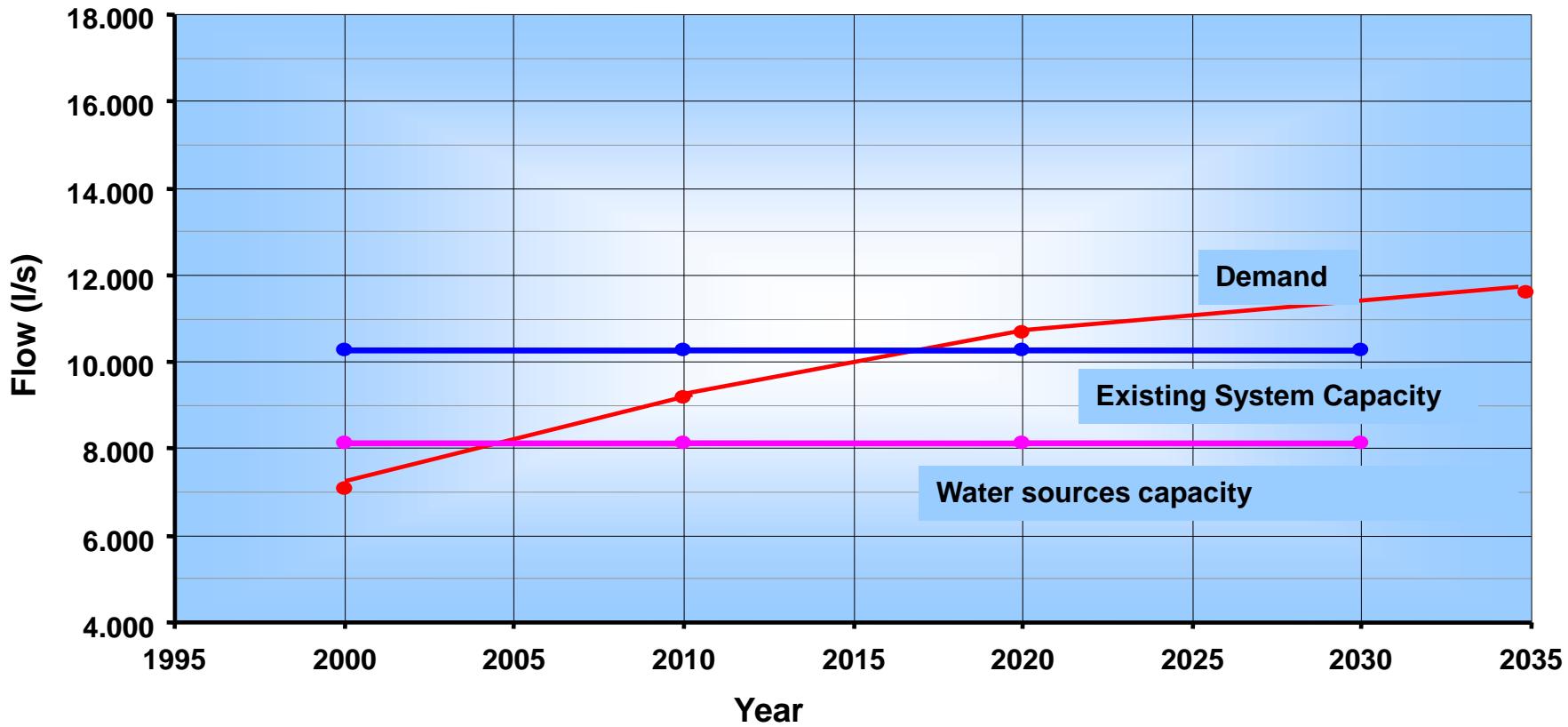
Climate change



Mata ciliar /
Mata de galeria

Campo

Demand x Capacity Balance



K. Neder



UnB

WG Data base



Catchments



WG Climate (Change)

WG Land Use

WG Water Cycle

Reservoirs



WG Sediments

WG Water Quality

Water Treatment



WG Drinking Water

WG Urban Drainage
and Waste Water

Water Distribution



WG Drinking Water Distribution

WG Utility Management



WG Decision Support System – IWRM



WG Capacity Building – Training of the trainers and technicians

Gente
de mais.
Água
de menos.



E o que você
faz para proteger
a nossa água?
Nada?

Cada vez mais, o número de pessoas nas cidades aumenta e a quantidade de água só faz diminuir.
A Adasa trabalha, dia a dia, na regulação, controle e fiscalização dos recursos hídricos do Distrito Federal.

Faça também a sua parte: não polua e não desperdice.

ÁGUA. USO CONSCIENTE,
BENEFÍCIO PERMANENTE.



Adasa
Agência Reguladora de Águas, Energia
e Saneamento Básico do Distrito Federal