



WATER DEVELOPMENT
DEPARTMENT
1047 NICOSIA



REPUBLIC OF CYPRUS
MINISTRY OF AGRICULTURE , RURAL
DEVELOPMENT AND ENVIRONMENT

MANAGEMENT OF WATER RESOURCES IN CYPRUS

International Conference
Water DROP

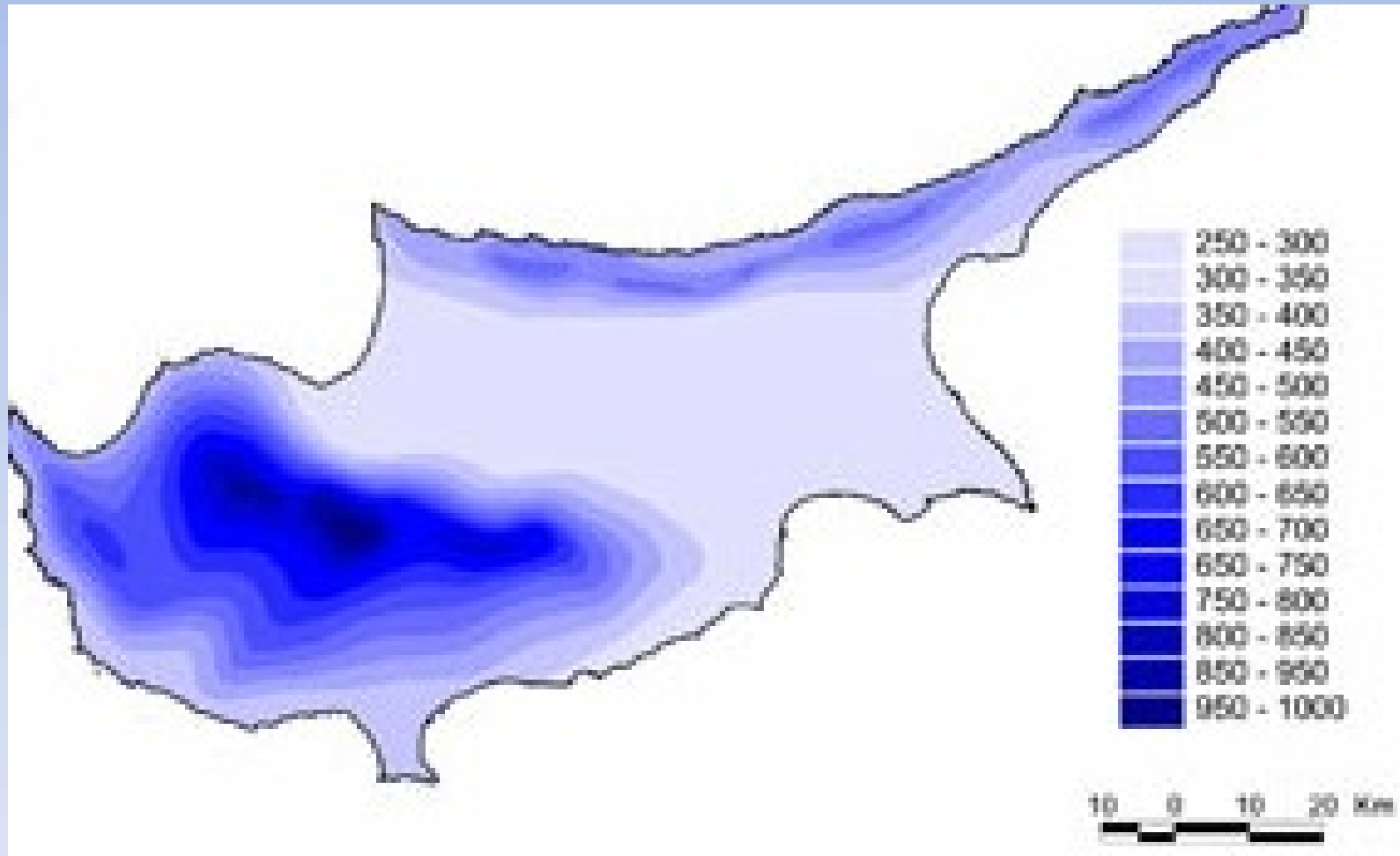
PAPHOS 31-5-2016

NICOS NEOCLEOUS
ACTING CHIEF WATER OFFICER

WATER DEVELOPMENT DEPARTMENT

- **Responsible for implementing the water policy of the Ministry of Agriculture, Rural Development and Environment.**
- **Main objective of this policy is the rational development, protection and management of the water resources of Cyprus**

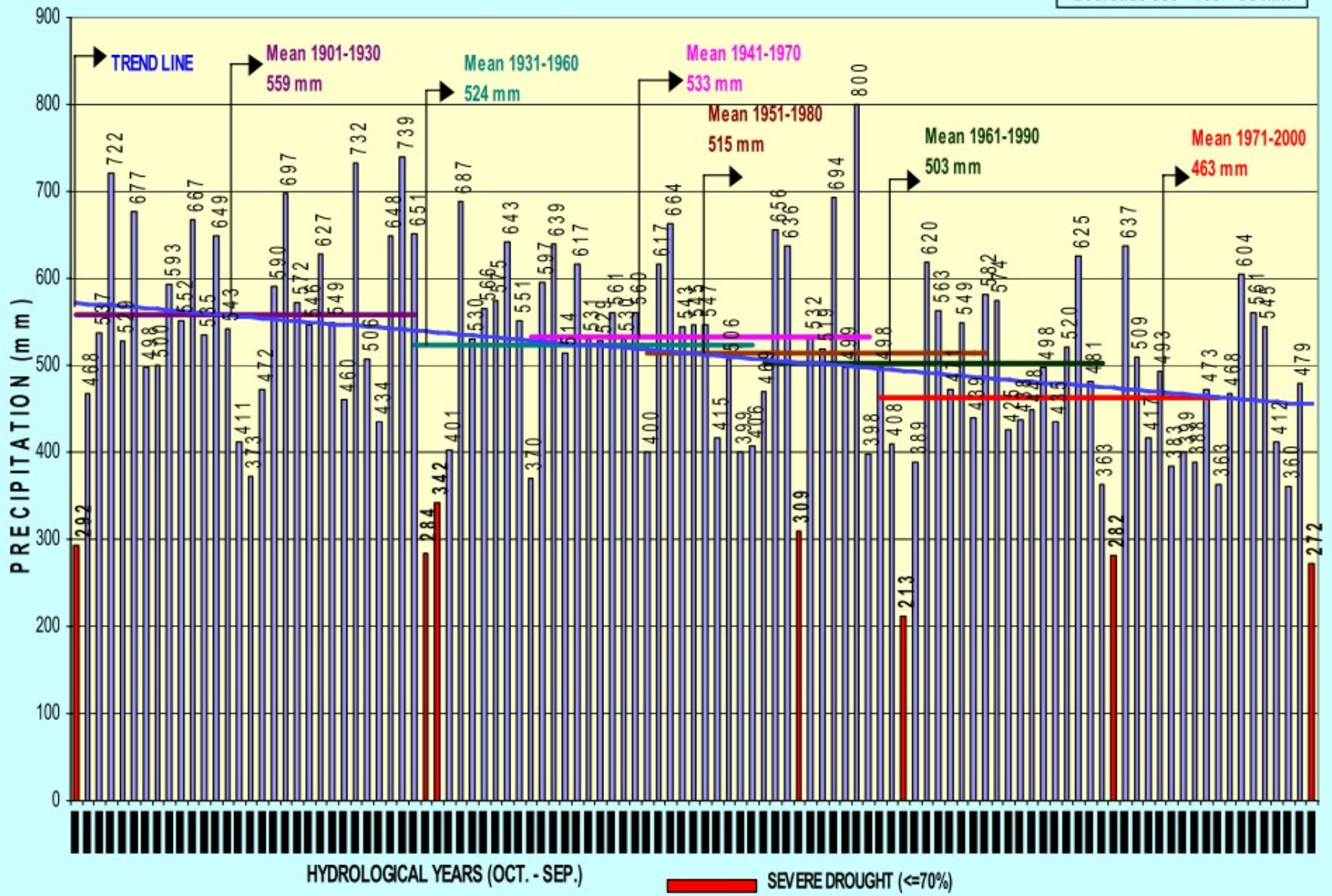
Annual Average Rainfall (mm)



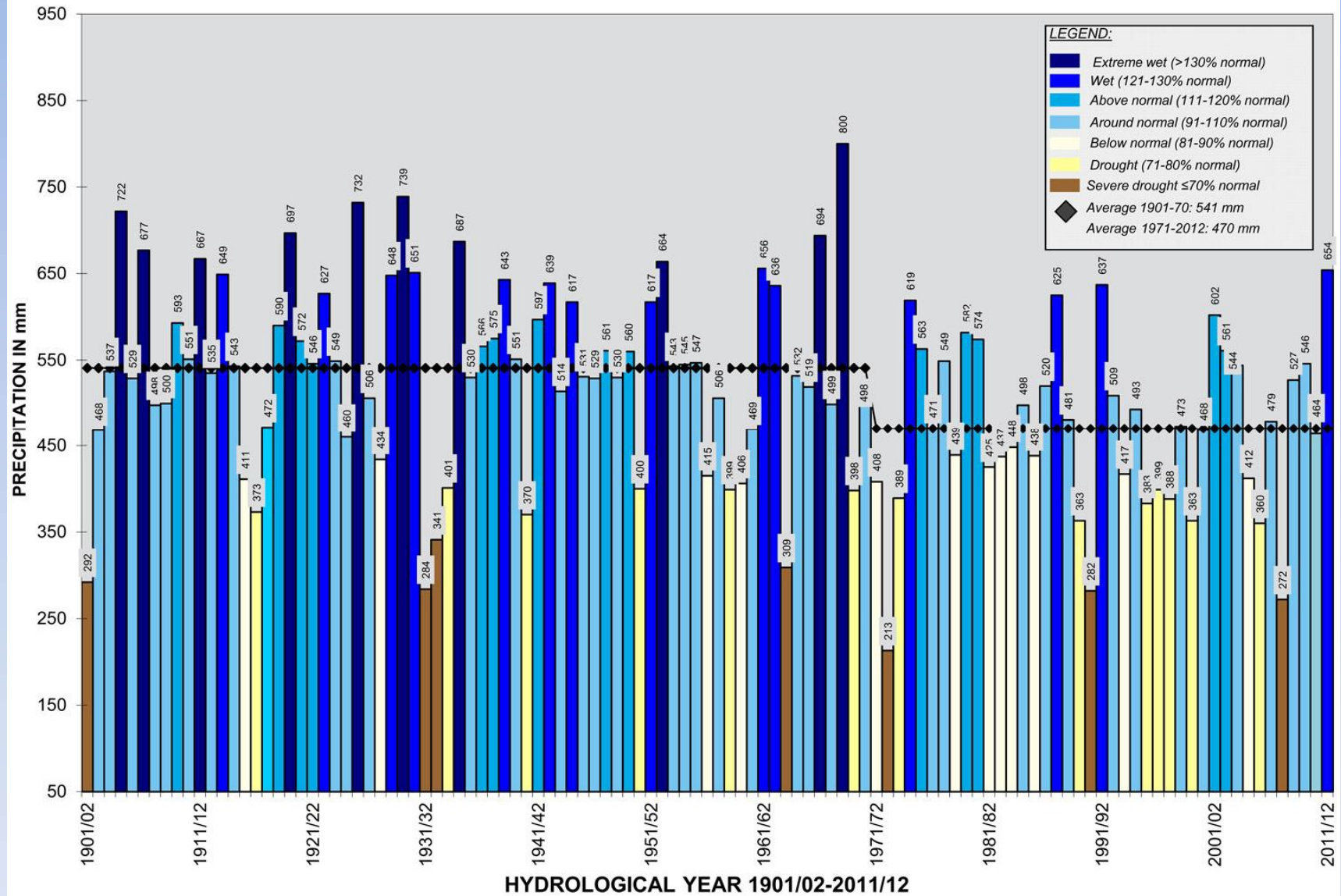
ANNUAL AREA AVERAGE PRECIPITATION (mm) IN CYPRUS (1901-02 - 2007-08)

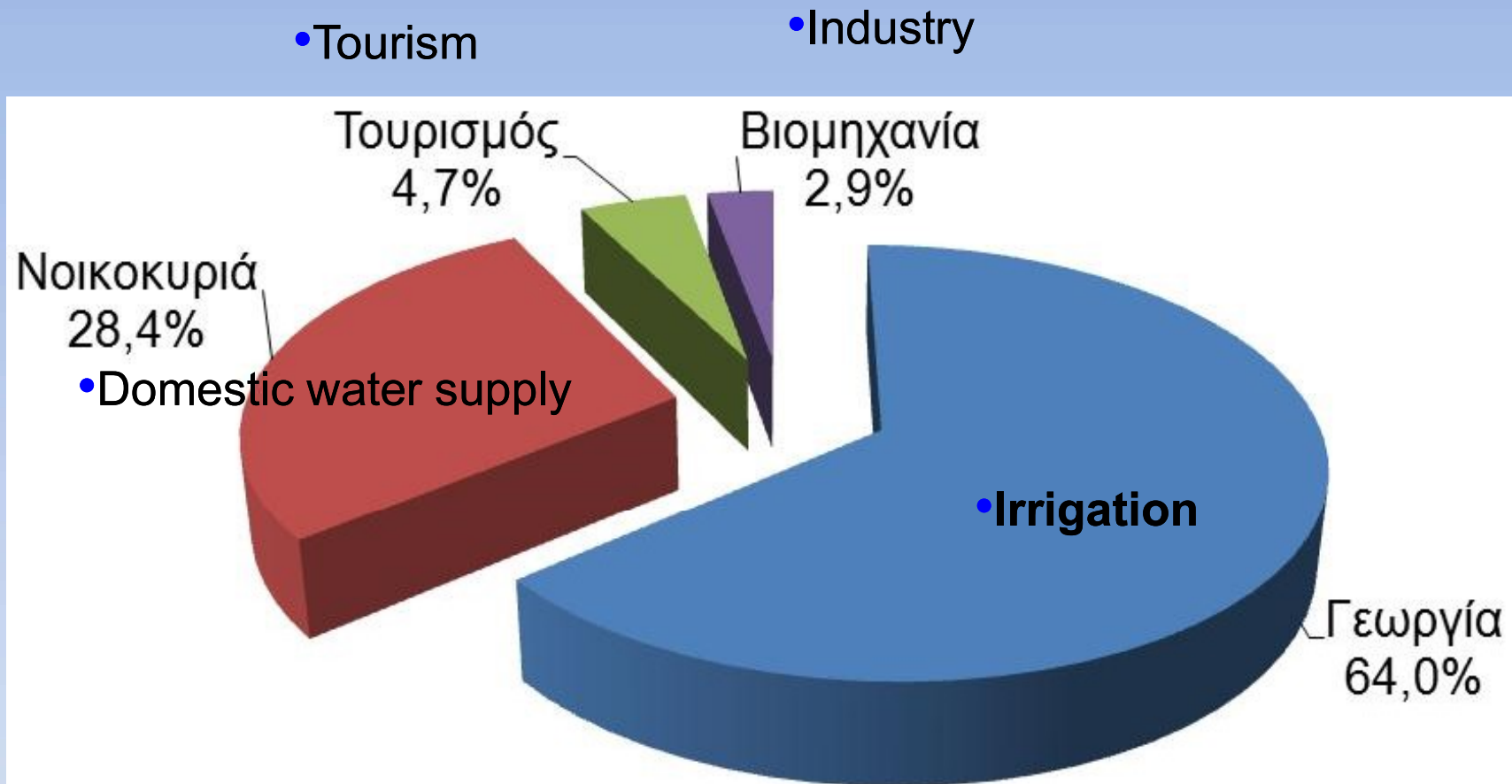
(For the area under Government Control)

Mean 1901-1930 = 559 mm
 Mean 1971-2000 = 463 mm
 Decrease 559 - 463 = 96 mm



CYPRUS ANNUAL PRECIPITATION (AREA UNDER GOVERNMENT CONTROL)





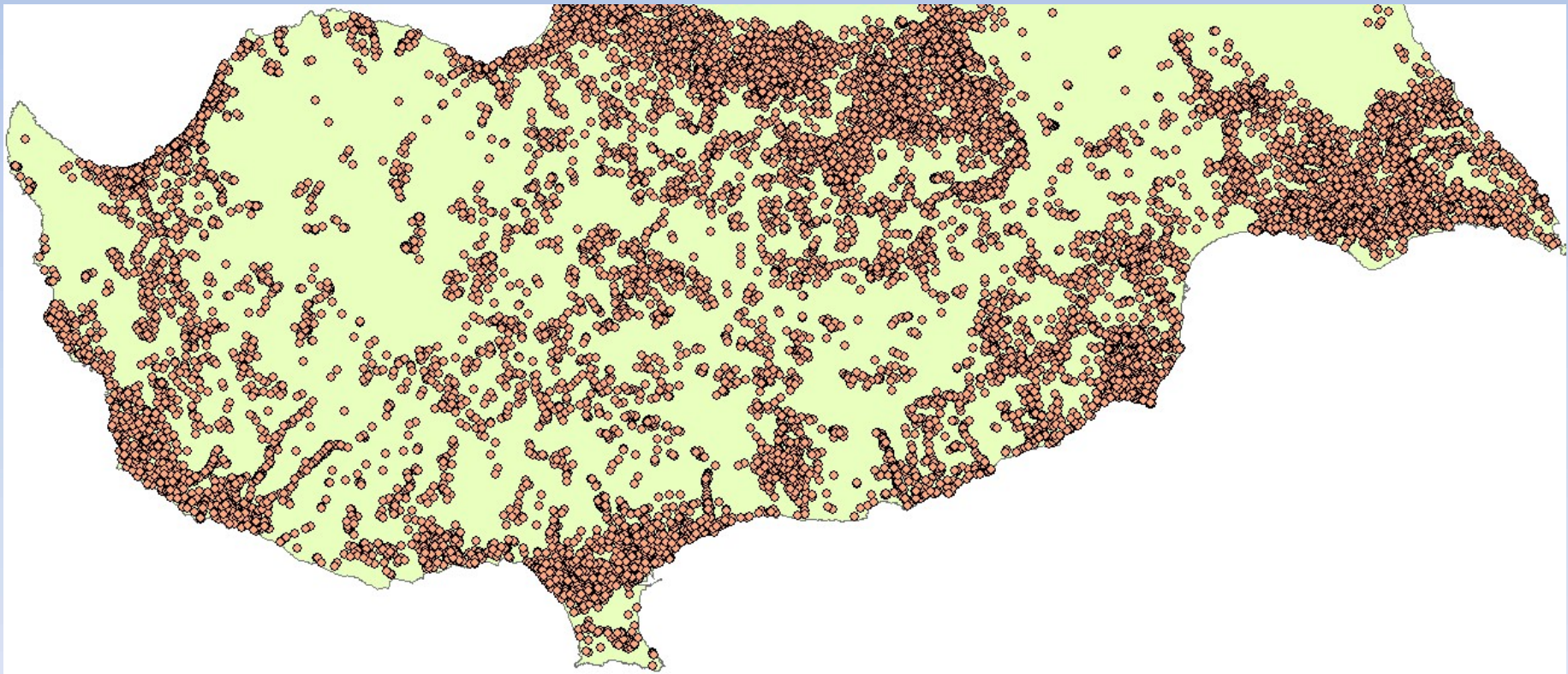
• Total needs per year: 250 MCM

Water Sources

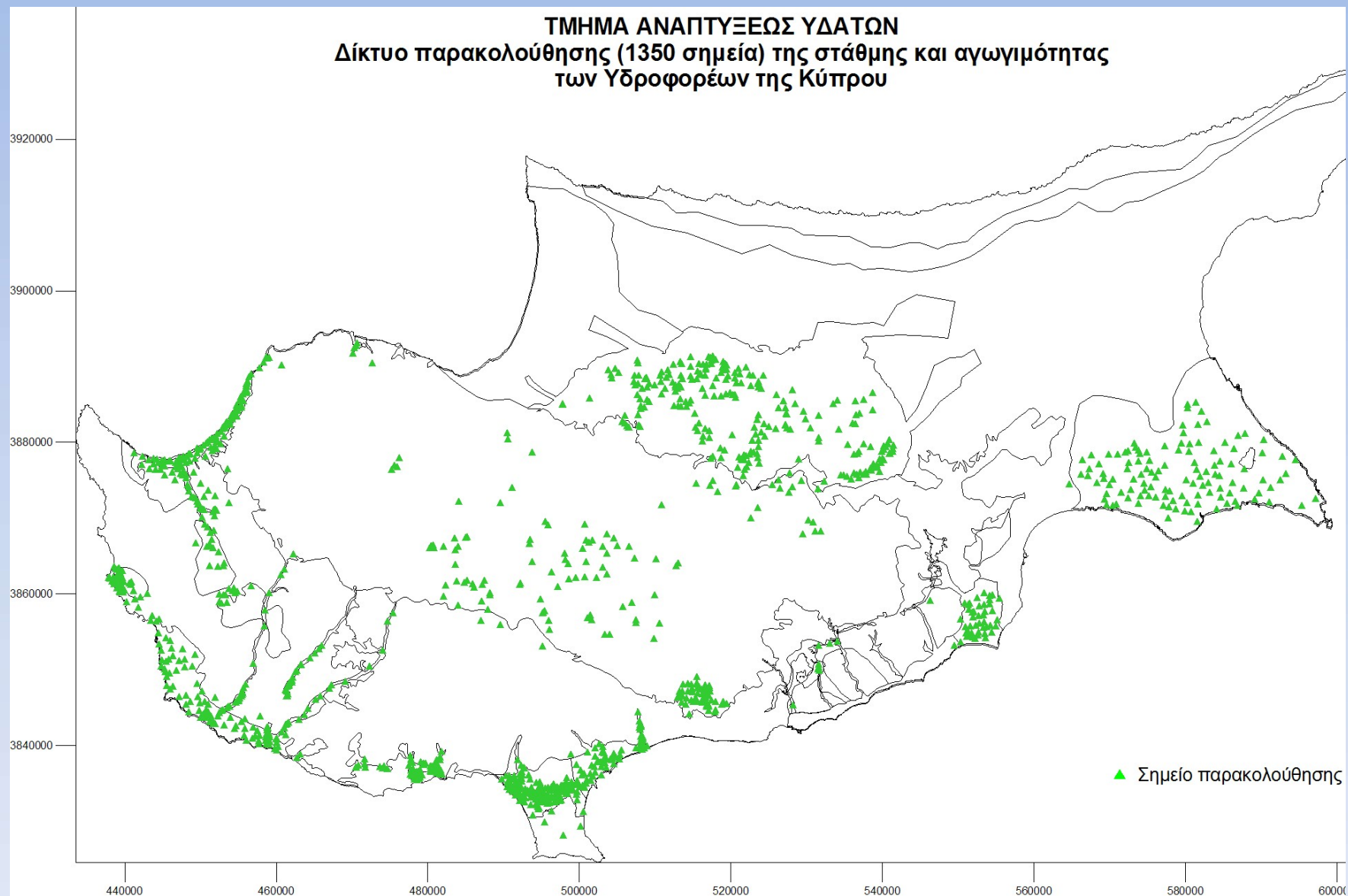
- **Underground water (boreholes, wells)**
- **Surface Water (Dams, rivers –diversions)**
- **Water from desalination plants**
- **Treated effluent**

UNDERGROUND WATER

45 000 BOREHOLES IN USE



Groundwater monitoring network (1100 boreholes) for monitoring water level and conductivity

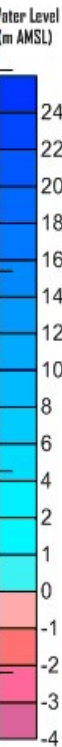
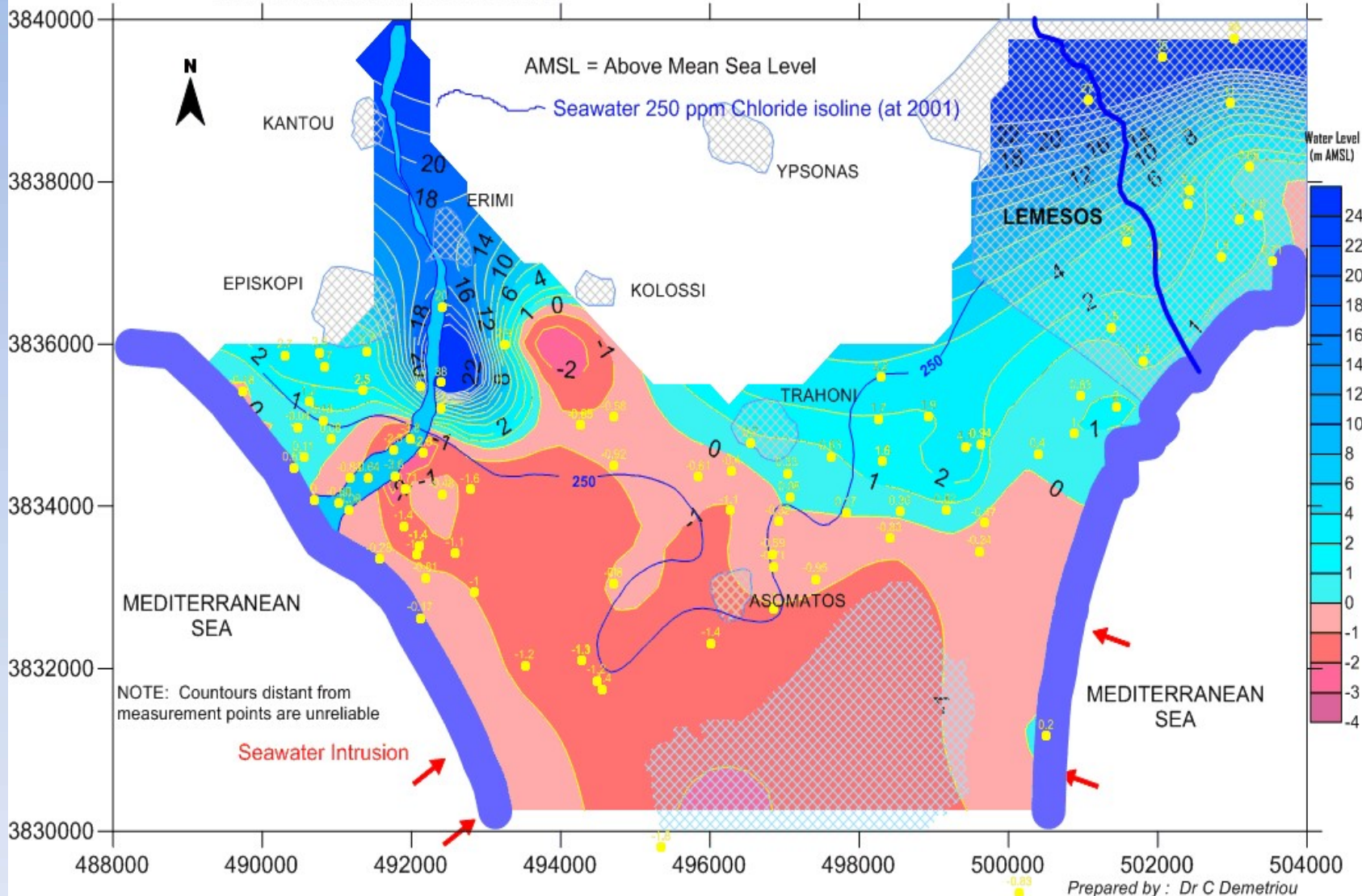


AKROTIRI AQUIFER

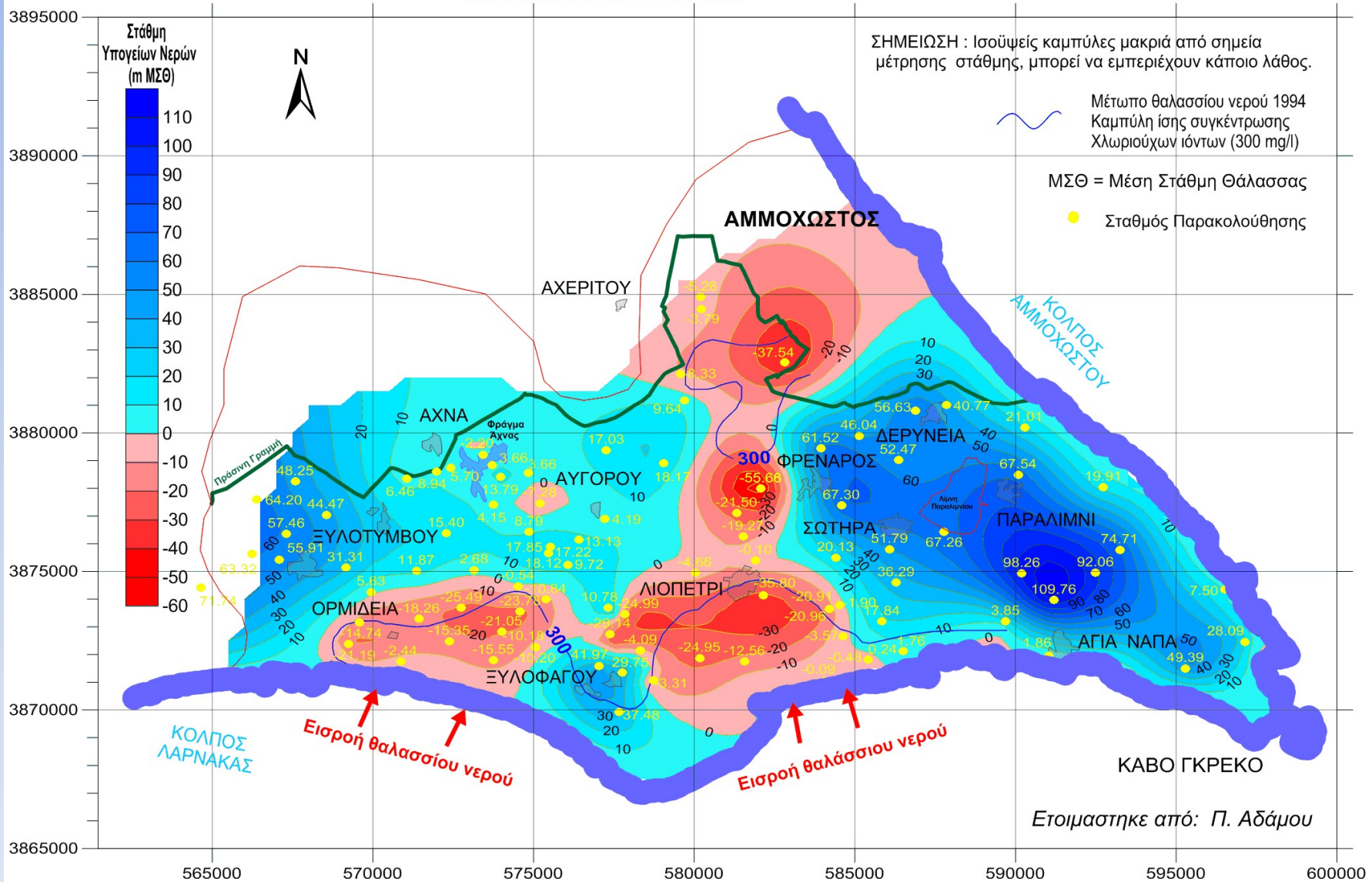
CONTOUR WATER LEVELS

MEASUREMENTS NOV DEC 2015

SCALE

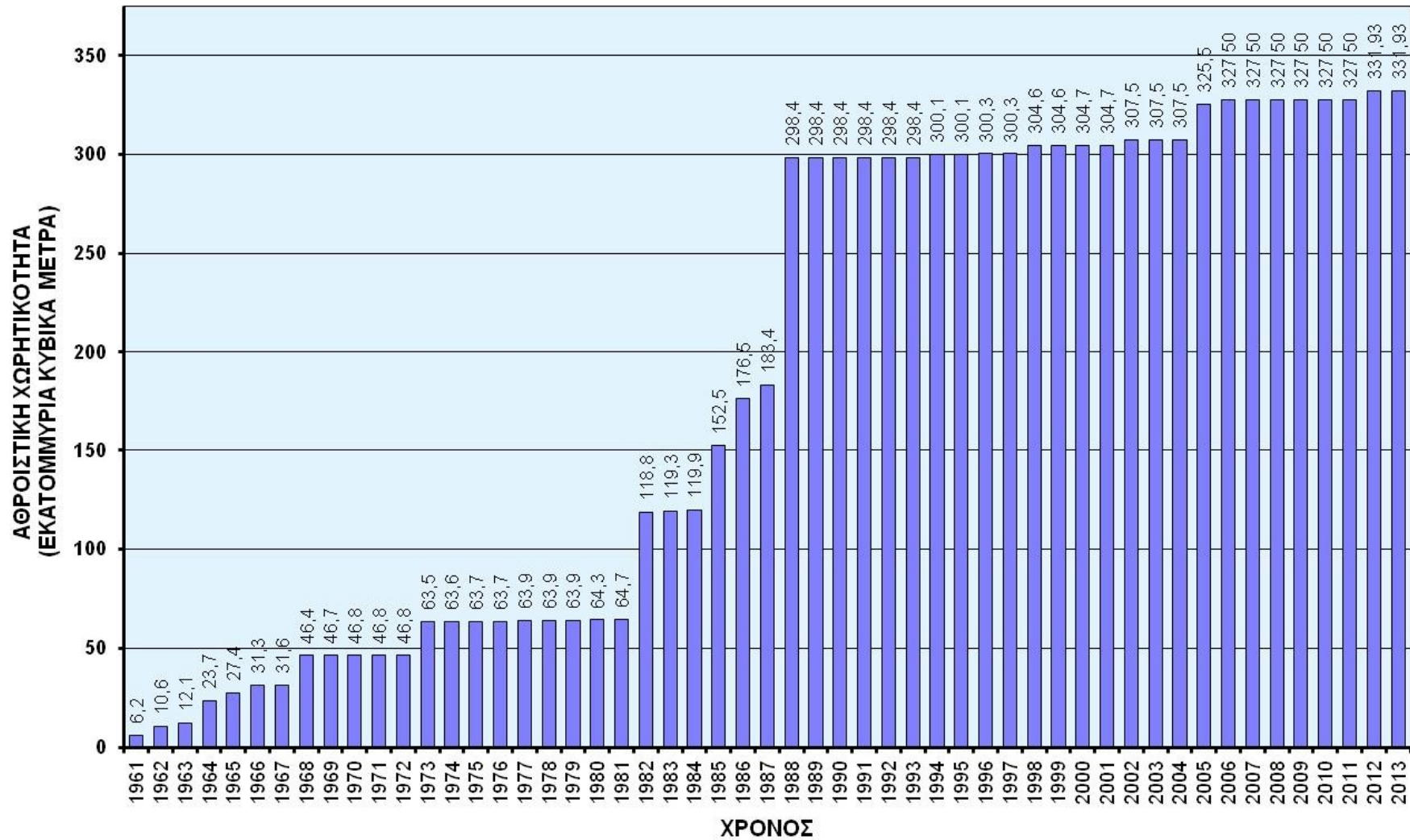


Prepared by : Dr C Demetriou



SURFACE WATER DAM CONSTRUCTION

ΚΑΤΑΣΚΕΥΗ ΦΡΑΓΜΑΤΩΝ 1961-2013

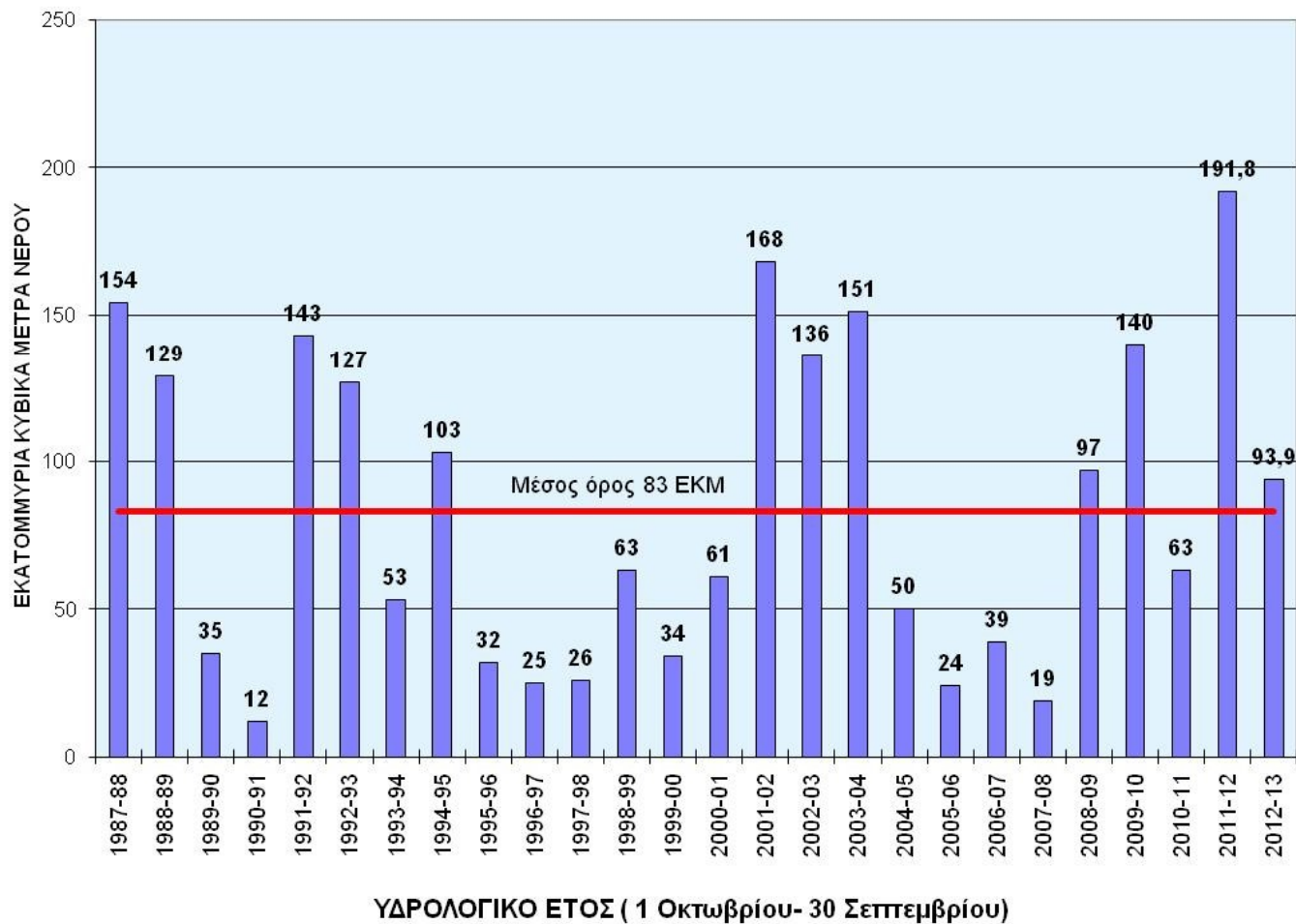


DAMS OF CYPRUS



Average annual inflow in the dams

ΕΙΣΡΟΗ ΝΕΡΟΥ ΣΤΑ ΦΡΑΓΜΑΤΑ
1987/88 - 2012/13





•KOURIS DAM



•ASPROKREMMOS DAM

MAJOR WATER PROJECTS

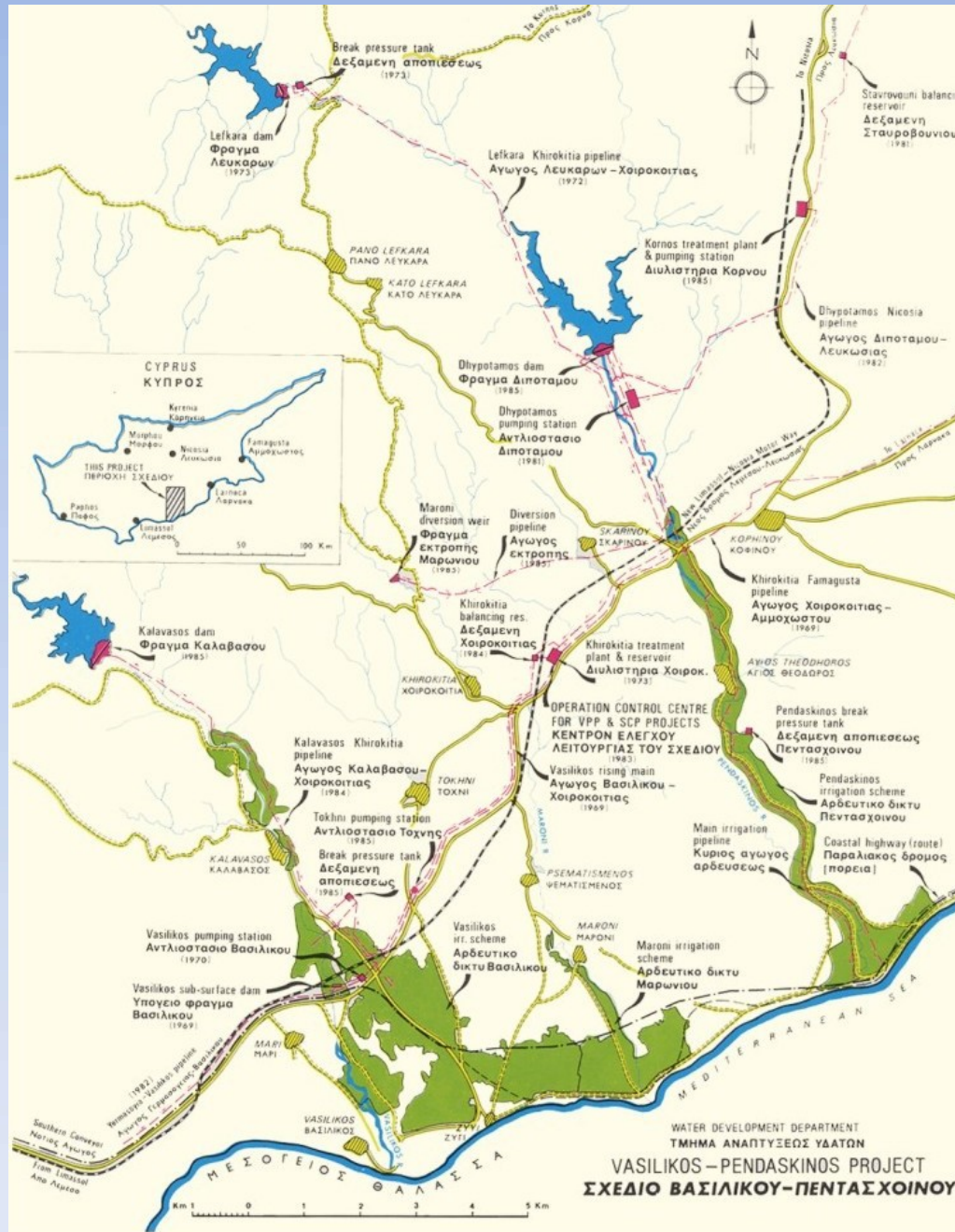
MAJOR WATER PROJECTS



SOUTHERN CONVEYOR PROJECT



VASILIKOS PENTASCHINOS PROJECT



CHRYSOCHOU IRRIGATION PROJECT



DESALINATION PLANTS

- LARNACA DESALINATION PLANT: 60.000 CM/DAY
 - DEKELIA DESALINATION PLANT: 60.000 MCM/DAY
 - VASILIKOS DESALINATION PLANT: 60.000 CM/DAY
 - LIMASSOL DESALINATION PLANT: 40.000 CM/DAY
-
- TOTAL CAPACITY: 220.000 CM/DAY

ABOUT 80 MCM/YEAR

DESALINATION PLANTS



RO 1ST STAGE MEMBRANE TRAINS





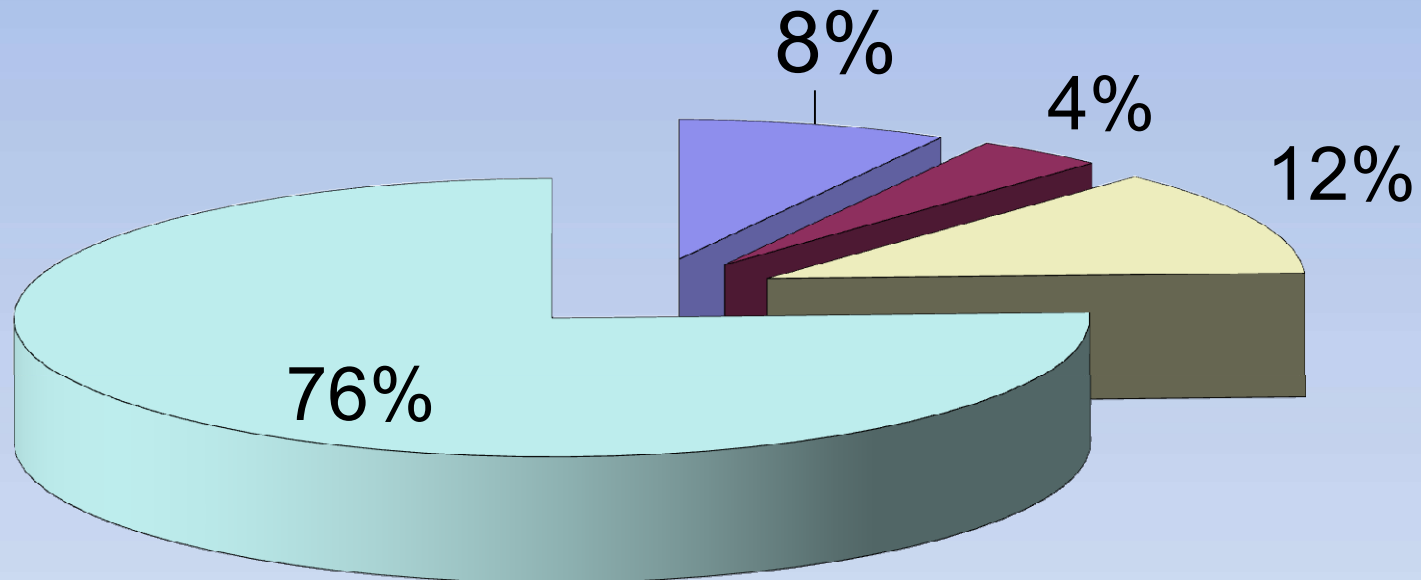
TREATED EFFLUENT

Existing Wastewater Treatment Plants

Plant	Owner of the Plant	Capacity (m ³ /day)
Anthoupolis	Nicosia Sewerage Board	13.000
Vathia Gonia	Nicosia Sewerage Board	22.000
Vathia Gonia	Water Development Department	2.100
Mia Milia	UNDP	30.000
Limassol (Moni)	Sewerage Board of Limassol Amathus	40.000
Larnaca	Sewerage Board of Larnaca	18.000
Paphos (Achelia)	Sewerage Board of Paphos	19.500
Paralimni –Ayia Napa	Sewerage Board of Paralimni- Ayia Napa	21.000

• **TOTAL CAPACITY 165.600 CM/DAY**

PERCENTAGES OF TREATED EFFLUENT DISPOSED



- PERCENTAGE OF TREATED EFFLUENT DISCHARGED TO THE SEA
- PERCENTAGE OF TREATED EFFLUENT DISCHARGED TO POLEMIDIA DAM
- PERCENTAGE OF TREATED EFFLUENT USED FOR AQUIFER RESCHARGE
- PERCENTAGE OF TREATED EFFLUENT USED FOR IRRIGATION PURPOSES

FUTURE QUANTITIES OF TREATED EFFLUENT

	2025
MUNICIPAL WASTEWATER TREATMENT PLANTS	69,000,000
WASTEWATER TREATMENT PLANTS FOR RURAL COMMUNITIES	16,000,000
TOTAL QUANTITIES	85,000,000



● **LIMASSOL (MONI) WWTP**

ΤΜΗΜΑ ΑΝΑΠΤΥΞΕΩΣ ΥΔΑΤΩΝ

ΥΠΟΥΡΓΕΙΟ ΓΕΩΡΓΙΑΣ, ΦΥΣΙΚΩΝ ΠΟΡΩΝ ΚΑΙ ΠΕΡΙΒΑΛΛΟΝΤΟΣ



WATER BUDGET Mean values (MCM) 2000 - 2011

Rainfall	476 mm
INFLOW (Surface storage)	82
INFLOW (Groundwater)	201
OUTFLOW (to the sea)	62
Available (Groundwater)	139
TOTAL Available (SW+ GW)	221
DEMAND	250
SW Releases	60
GW extraction (Pumping)	146
TOTAL Releases/ Extractions	206
RELEASES - DEMAND	-44 (+33*+8**)

Our slogan:

A high-speed photograph of a single water drop falling into a pool of water. The drop is captured mid-fall, just above the surface, with a small splash of water below it. Concentric ripples are visible on the water's surface, spreading outwards from the point of impact. The background is a solid, deep blue color.

EVERY DROP COUNTS

THANK YOU

