

**Cyprus Obligations in Implementing the
Urban Waste Water Treatment Directive
(UWWTD) 91/271/EEC
by the year 2012**

Overview of the current situation in Cyprus

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1. Introduction

- ❑ The UWWTD 91/271/EEC plays a major role in the management of urban wastewater**
- ❑ Its implementation in the EU-15 Member States, even 14 years after adoption, still presents significant challenges.**
- ❑ Challenges are even more marked for the new EU-10 Member States as the Directive is one of the most expensive pieces of EU legislation to implement.**

2. Briefing on the UWWTD

Objective of the Directive :

To prevent the environment from being adversely affected by the disposal of untreated or insufficiently treated urban wastewaters.

Requirements :

- Legal transposition (Laws and Regulations)
- Infrastructure (Implementation Programme)
- Authorization (Discharge Permits)
- Monitoring (Quality of Discharges)
- Reporting (to EC and Public)

Important Definitions :

Urban waste water means : domestic wastewater or the mixture of domestic wastewater with industrial wastewater and/or run-off water

Agglomeration means : an area where the population and/or economic activities are sufficiently concentrated for urban wastewater to be collected and conducted to a treatment plant or to a focal discharge point.

It should be noted that : the limit of an agglomeration may or may not correspond to the boundaries of an administrative entity. Thus, several administrative entities could form one agglomeration and vice versa.

Clarifications on the Directive Definitions :

- Some of the definitions of the Directive are ambiguous.**
- EC started a series of workshops in 2004-2005 at Brussels with participation of all MS-25 , with the target to clarify these ambiguities.**
- Until today, the conclusions of the workshops are not yet published.**

3. Legal Transposition of the Directive **(Article 19)**

The legal transposition of the Directive **has been achieved** through :

the Water and Soil Pollution Control Law, N 106 (I) 2002 and its Regulations ΚΔΠ 772/2003 on discharges and ΚΔΠ 111/2004 on sensitive areas.

Amendments to the Sewerage Systems Law, N 108 (I) 2004

the Environmental Impact Assessment Law, N 57(I), 2001

4. Historical Evolution and Submissions of the Cyprus Implementation Programme (IP)

According to Article 17 of the UWWTD, MS shall establish a National programme for the implementation of the Directive and provide the Commission with information on the programme. The programme should be updated every 2 years, when necessary.

- ❑ **1998 : 1st submission of CY-IP as part of the pre-accession negotiations.**
- ❑ **2003 : Cyprus Accession Treaty Agreement was signed. The deviations from the Directive and the transitional period were stipulated.**

- ❑ **01-05-2004 : EU-Enlargement with new MS-10**
- ❑ **01-11-2004 : MS-10 had the obligation to submit their IPs on a pre-fixed format, indicating the compliance degree with the Directive. Cyprus requested a 4-month extension for this submission.**
- ❑ **01-03-2005 : Revised CY-IP of 2005 was prepared by WDD and submitted to Cyprus Permanent Representative in Brussels through the Environmental Service of the MANRE.**

5. Description of the CY - IP

Transitional Period:

Under Annex VII of the Accession Treaty the final deadline for the Transitional Period is the :

31st December 2012

However, there are **3 intermediate target dates** to **comply with the UWWTD.**

3 Intermediate target dates :

31-12-2008 : 2 agglomerations with p.e. > 15.000
(Limassol and Paralimni)

31-12-2009 : 1 agglomeration with p.e. > 15.000
(Nicosia)

31-12-2011 : 1 agglomeration with p.e. > 15.000
(Paphos)



31-12-2012 : all the rural agglomerations and 1
agglomeration with p.e. > 15.000
(Larnaca)

Description of the CY-IP:

	CY-IP 1998	CY-IP 2005
Based on Population Census	1992	2001
No. of Urban Agglomerations	6	6
No. of Rural Agglomerations	38	36
Total No. of Agglomerations	44	42
Load of Urban Agglomerations	528.000 (85%)	545.000 (80%)
Load of Rural Agglomerations	91.247 (15%)	130.000 (20%)
Total Load of Agglomerations	619.247 p.e.	675.000 p.e.

ID No.	No.	Agglomerations		Population census 1992	Population census 2001	1998 Implementation programme P.E.	2005 Revised Implementation programme P.E.	Today in compliance		
								Population Equivalent	Percentage	In Compliance
A	<u>Urban Agglomerations</u>									
CY21	1	Nicosia Greater Urban (9 agglomerations)	*	174.018	207.869	169.000	190.000	129.000	68%	
CY51	2	Limassol Greater Urban (8 agglomerations)	*	131.534	153.438	135.000	145.000	113.000	78%	
CY41	3	Larnaca Greater Urban (3 agglomerations)		50.366	56.265	76.000	70.000	42.500	61%	
CY61	4	Paphos Greater Urban (4 agglomerations)		29.857	41.585	75.000	67.000	38.333	57%	
CY31	5	Ayia Napa		1.795	2.881	27.500	27.500	27.500	100%	√
CY32	6	Paralimni		7.721	11.101	45.500	45.500	45.500	100%	√
	6	TOTAL URBAN		395.291	473.139	528.000	545.000	395.833	73%	2
B	<u>Rural Agglomerations</u>									
	<u>Nicosia District</u>									
CY201	1	Peristerona		2.279	2.098	2.279	2.300			
CY202	2	Astromeritis		2.325	2.360	2.325	2.400			
CY203	3	Akaki		2.372	2.653	2.372	2.400			
CY204	4	Lythrodontas		2.015	2.622	2.100	3.000			
CY205	5	Paliometochi		3.540	4.110	3.540	4.000			
CY206	6	Kokkinotremithia		2.639	3.088	2.639	3.000			
CY207	7	Dhali	*	4.757	5.831	-	3.000	3.000	100%	√
CY208	8	Pera Chorio	*	2.236	1.966	-	2.000	2.000	100%	√
CY209	9	Lympia		2.030	2.167	2.030	2.100			
CY210	10	Kakopetria		1.251	1.203	2.500	2.500			
CY211		Galata	**	769	651	1.500	-			
CY212		Pedhoulas	**	293	191	2.000	-			
CY213		Moutoulas	**	401	294	1.000	-			
CY214		Kalopanayiotis	**	401	287	1.000	-			
CY215		Oikos	**	213	187	500	-			
CY216		Tseri	#			4.176	(Under CY21)			
				27.521	29.708	29.961	26.700	5.000	19%	2

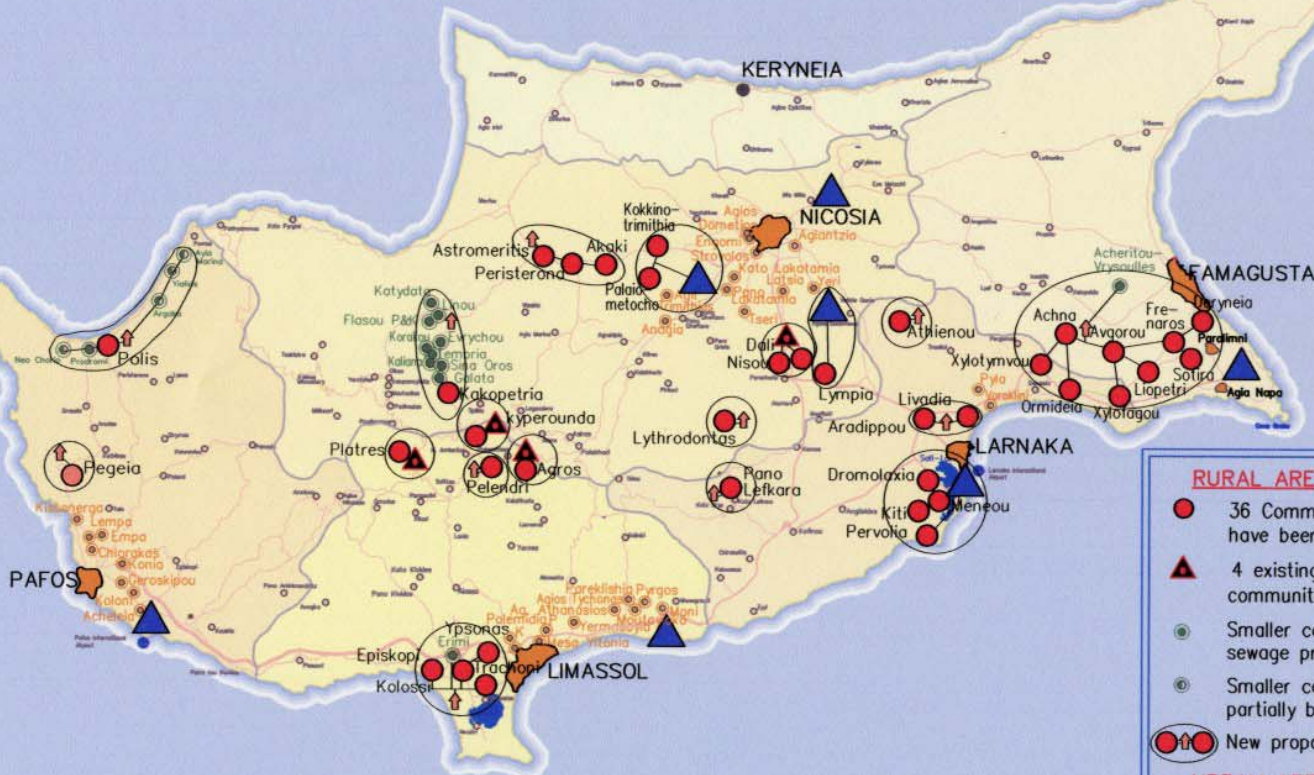
Notes: * = additional agglomeration
 ** = Deleted Agglomeration
 # = Merged Agglomeration in Greater Urban

ID No.	No.	Agglomerations	Population census 1992	Population census 2001	1998 Implementation programme P.E.	2005 Revised Implementation programme P.E.	Today in compliance		
							Population Equivalent	Percentage	In Compliance
		Limassol District							
CY501	11	Kyperounda	1.455	1.495	2.000	2.000	2.000	100%	√
CY502	12	Platres	377	193	2.000	2.000	2.000	100%	√
CY503	13	Agros	764	837	2.500	2.500	2.500	100%	√
CY504	14	Pelendri	1.377	1.185	2.000	3.000			
CY505	15	Ypsonas	4.457	6.430	4.475	6.400			
CY506	16	Kolossi	2.982	3.685	-	3.600			
CY507	17	Episkopi	2.783	3.105	-	3.100			
CY508	18	Trachnoni	3.022	3.301	-	3.300			
			17.217	20.231	12.975	25.900	6.500	25%	3
		Larnaca District							
CY401	19	Lefkara	971	917	2.000	2.000			
CY402	20	Aradippou	7.223	11.459	7.223	11.000			
CY403	21	Kiti	2.661	3.141	2.621	3.100			
CY404	22	Pervolia	1.507	1.798	1.500	2.000			
CY405	23	Dromolaxia / Meneou	5.373	6.151	5.373	6.000			
CY406	24	Livadhia	3.965	4.875	3.936	4.800			
CY407	25	Athienou	3.870	4.258	3.868	4.200			
CY408	26	Ormidia	3.682	3.941	3.682	3.800			
CY409	27	Xylyotymvou	3.138	3.443	3.138	3.400			
CY410	28	Xylophagou	4.511	4.981	4.511	5.000			
			36.901	44.964	37.852	45.300	0	-	0
		Famagusta District							
CY301	29	Avgorou	3.585	4.002	3.585	4.000			
CY302	30	Sotira	3.553	4.258	3.553	4.100			
CY303	31	Liopetri	3.321	3.838	3.321	3.700			
CY304	32	Phrenaros	3.122	3.306	-	3.300			
CY305	33	Achna	1.763	1.958	-	2.000			
CY306	34	Derynia Municipality	4.165	4.945	-	5.000			
			19.509	22.307	10.459	22.100	0	-	0
		Paphos District							
CY601	35	Polis Municipality	1.252	1.892	-	5.000			
CY602	36	Peyia Municipality		2.359	-	5.000			
			1.252	4.251	0	10.000	0	-	0
	36	TOTAL RURAL	74.879	91.753	91.247	130.000	11.500	9%	5
	42	GRAND TOTAL	470.170	564.892	619.247	675.000	407.333	60%	7

Notes: * = additional agglomeration
 ** = Deleted Agglomeration
 # = Merged Agglomeration in Greater Urban

CYPRUS IMPLEMENTATION PROGRAMME OF THE URBAN WASTEWATER TREATMENT DIRECTIVE

91/271/EEC



Legend

RURAL AREAS: (36 agglomerations)

- 36 Communities with equivalent population > 2000 that have been included in the implementation programme.
- ▲ 4 existing Rural Sewage Treatment Plants—STP (serving 5 communities).
- Smaller communities with p.e.< 2000 that are experiencing sewage problems and they will agglomerate.
- Smaller communities with p.e.< 2000 that will be served partially by STP (tourist areas).
- ↑ New proposed combined schemes with common STP.

URBAN AREAS: (6 agglomerations)

- ▲ 6 existing & 1 planned Urban STPs.
- Municipalities/Communities to be served by the existing/planned Urban STPs of the corresponding Urban Areas (Nicosia, Limassol, Pafos, Larnaka, Paralimni, Agia Napa).
- Communities partially served by Urban STP (tourist areas)

5. Current situation & compliance of the CY- IP

Responsibility for the construction of the CY-IP:

- ❑ Urban Agglomerations : responsibility rests with the corresponding Urban Sewerage Boards.
- ❑ Rural Agglomerations :
 - Implementation will be undertaken by **WDD** for all the rural communities.
 - for 2 agglomerations by the Town Planning & Housing Department (Pelendri and Lythrodontas).
 - Rural Municipalities may undertake their own construction, if they have the technical Know-how (like Polis, Aradippou etc).

Current Compliance of the CY-IP:

As at present, the compliance of the CY-IP **in terms of population equivalent** is as follows :

Urban Agglomerations in compliance :

Agglomer. Name	Popul. Census 2001	CY-IP p.e.	Total in Compliance	Percentage in compliance
Nicosia	207.869	190.000	129.000	68%
Limassol	153.438	145.000	113.000	78%
Larnaca	56.265	70.000	42.500	61%
Paphos	41.585	67.000	38.333	57%
Ay. Napa	2.881	27.500	27.500	100%
Paralimni	11.101	45.500	45.500	100%
OVERALL	473.139	545.000	395.833	73%

Rural Agglomerations in compliance:

Agglomer. Name	Popul. Census 2001	CY-IP p.e.	Total in Compliance	Percentage in compliance
Dhali	5.831	3.000	3.000	100%
Perachorio	1.966	2.000	2.000	100%
Kyperounta	1.495	2.000	2.000	100%
Platres	193	2.000	2.000	100%
Agros	837	2.500	2.500	100%
Other 31	81.431	118.500	0	0%
OVERALL	91.753	130.000	11.500	9%

Current situation of Rural projects:

1. **31** Rural Agglomerations are **still to be completed**.
2. **2** projects of the Town and Housing Department are **at the tendering stage** and will commence construction shortly (Pelendri and Lythrodontas).
3. WDD secured funding from EE for carrying out the **studies for 26** Rural agglomerations. The studies, conducted by independent consultants, were **completed** in August 2005 and included :
 - Feasibility studies
 - Environmental Impact Assessment studies
 - Detailed Design and BOQ's
 - Financial studies
 - Typical Tender documents

4. WDD is **currently** at the **pre-construction phase** of the above **26 rural projects**, which includes :
 - Establishment of Communal Sewerage Boards
 - Land acquisition
 - Securing Financing
 - Tendering
5. WDD estimated construction period for the CY-IP Rural projects to be **2007-2011** with approx. **30 contracts** running in parallel.
6. The remaining **3 Rural** agglomerations are at the **design stage by WDD** (Kakopetria, Lefakara & Peyia).

7. Estimated Costs for the CY- IP

Urban Areas : CY £ 260 Million (Euro 456 M)

Rural Areas : CY £ 150 Million (Euro 263 M)

OVERALL COST : CY £ 410 Million (Euro 719 M)

- **Average** Sewerage charge :
 - £ 120 / household for rural communities
 - £ 240 / household for rural Municipalities

In some cases this is very high due to :

a) low density population

b) non- agglomerated system (no economy of scale)

8. Government's Financing Policy

The Subsidy Policy of the Government is based on Council of Ministers Decisions aiming at :

- No discharge, to prevent pollution
- Promoting water conservation through re-use
- Upgrading of Rural Areas.

→ **Two different subsidy policies : for Rural and Urban areas.**

SUBSIDY POLICY - RURAL AREAS

- Government subsidizes substantially the **CAPITAL investment only**, which includes :
 - collection network
 - conveyance pipeline to the treatment plant
 - sewage treatment plant
 - reservoir for storing the treated water
 - main conveyor to the irrigation area
- **No Government subsidy for OPERATION & MAINTENANCE cost.**

1. Government subsidizes **80%** of the Capital investment, for **communities with p.e.>2.001**
2. For communities that will agglomerate between them and they will be served by **one common STP**, Government subsidizes **100%** the conveyance pipeline and treatment plant **for the community that houses the STP.**
3. For communities that will **join Urban Sewerage Boards** the subsidy is **80% of the tender price** of the collection network and conveyance pipeline **only.**

4. For Rural **Municipalities**, the Government subsidizes **only the tertiary treatment**.

Other Subsidies:

- Government provides indirect subsidies, e.g. Consultancy services and supervision.
- Government subsidizes re-use schemes.

Financing Means for Rural Projects:

The Rural Sewerage Boards will secure the total loan from private local banks in 2 loan agreements :

- a) 1st loan agreement covers the contribution of the community which is 20% of the capital investment. In this agreement the Guarantor is the Government.**
- b) 2nd loan agreement covers the contribution of the Government which is 80%.**

Financing Possibilities for the IP (Rural areas):

1. Efforts are being made by the Government to secure 50% financing from the **European Investment Bank (EIB)**.
2. EIB offers very attractive loan terms, with long repayment and grace periods and low interest rates.
3. EIB prefers to deal with a single borrower than having to deal with a lot of small borrowers (Sewerage Boards), so the solution is an **intermediary Bank**.
4. The Communal Sewerage Boards will then apply for securing their loans from the intermediary Bank established in Cyprus and approved by EIB.

FINANCING POLICY - URBAN AREAS

Government pays for Tertiary & Re-Use only.

Financing Means :

- **Urban Sewage Boards secure their loans from Private local banks or International Banks.**
- **Government pays its share of installments**

9. Problems encountered in the IP Progress

1. Acceptability of the agglomerated schemes by the communities

→ it implies redesign of the schemes, new EIA studies, new financial studies.

2. Acceptability of the STP location, by the communities

→ it implies finding a new location of the plant, which is widely acceptable and partial redesign of conveyance pipelines.

3. Securing Finance

→ To facilitate financing, an organizational study is required by EIB to prove the project's viability and sustainability.

4. Institutional matters, such as the management of one agglomerated Sewerage Board (representation in the Board by Community members).

5. Demands for Government subsidies from Rural Municipalities

→ There is no current policy.

10. Reporting Requirements (Articles 15(4), 16 and 17)

- ❑ **Report on monitoring of discharges – Article 15(4) :** will be prepared by the Environmental Service of the MANRE, with reference year 2004 and will be submitted to the Commission by the end of 2006
- ❑ **Publish Situation Report – Article 16 :** will be prepared by the Environmental Service, covering period 1/05/2004 – 31/12/2004 and will be submitted by 30 June 2006
- ❑ **Report on Implementation Programme – Article 17 :** will be prepared by the WDD, covering period 1/05/2004 – 31/12/2004 by 30 June 2006

11. Representation to the Committee **(Article 18)**

- **Representative of Cyprus to the Committee is the Director of the Environmental Service of MANRE.**
- **When the issue relates particularly to the Implementation Programme (infrastructure part) and concerns the Water Development Department, a representative of the Department is appointed.**

12. Future Projections

- 1. It is foreseen that Cyprus will achieve the target of completing its Implementation Programme by the year 2012.**
- 2. This will imply intensive infrastructure construction between the years 2007-2011, with approx. 30 contracts running in parallel all over Cyprus.**
- 3. Institutional matters, must be shortly resolved and if needed the current Laws and Regulations be modified.**



The End

Thank you for your attention

