



REPUBLIC OF CYPRUS

**MINISTRY OF AGRICULTURE, NATURAL RESOURCES
AND ENVIRONMENT**

REPORT ON ARTICLE 17 OF 91/271/EEC DIRECTIVE

- CYPRUS REVISED IMPLEMENTATION PROGRAMME -

February, 2005

25 February 2005

Explanatory Note
to Cyprus Revised Implementation Programme 2005
- Article 17 of 91/271/EEC Directive -

1. Cyprus has already its Implementation Programme document in place, reported and submitted during the Accession negotiations. This programme was based on 44 Agglomerations, which, according to the Population Census of 1992, had permanent and seasonal population greater than 2.000 p.e. The interim transitional periods incorporated in the Accession Treaty are as follows:
 - 2008 : 2 agglomerations >15.000 p.e (Limassol & Paralimni)
 - 2009 : 1 agglomeration > 15.000 p.e. (Nicosia)
 - 2011 : 1 agglomeration > 15.000 p.e. (Paphos)
 - 2012 : 1 agglomeration > 15.000 p.e. (Larnaca)
 - 2012 : 39 agglomerations of 2.000 – 10.000 p.e.

2. During the preparation of the Article 17 Report, Cyprus did not just transfer the information of its existing Implementation Programme document in the format set out in Decision 93/481/EEC of 28 July, 1993, but took the opportunity to review and revise the Programme based on the following criteria:
 - a) Changes of agglomeration nominal loads, due to increases/decreases in population, based on the most recent population Census of 2001 (issued by the Statistics Service).
 - b) Design developments and policy decisions by Local Authorities (e.g. adding or removing sufficiently concentrated areas (settlements) to a given agglomeration or merging sufficiently concentrated areas).
 - c) Clarifications on the reporting mechanism and the Directive definitions, obtained from the Workshops on reporting, in Brussels.

3. As a result, in the revised Implementation Programme the total population equivalent increased from 619.247 to 675.000, whilst the total number of agglomerations reduced from 44 to 42. Furthermore, certain names of agglomerations have been added or deleted.

4. The specific changes to the names of agglomerations are as follows:
 - a) Dhali Municipality (with identification No : CY207) and Pera Chorio (CY208) with a total permanent population of 5.831 and 1.966 respectively, based on the 2001 Population Census, are added as 2 independent agglomerations,

although today are served by 2 separate collection systems and one common UWWT plant.

- b) Galata, (CY211), Pedhoulas (CY212), Moutoulas (CY213), Kalopanagiotis (CY214) and Oikos (CY215) : 5 agglomerations with a total permanent population of 1.714 (based on the 1992 Census) reduced to a total permanent population of 1.610 (based on the 2001 Census). These agglomerations are excluded from the revised Implementation Programme due to the decrease in the population growth and tourism activity.
 - c) Tseri (CY216) does not appear in the revised new Implementation Programme as an individual agglomeration, as it has been incorporated in the design of the Greater Urban Nicosia Agglomeration (CY21).
 - d) Achna (CY305): this agglomeration, with corresponding actual permanent population of 1.958, (based on the 2001 population Census) was added.
 - e) Peyia Municipality (CY602) has been added as an individual agglomeration, since its permanent 2001 Census population was 2.359, but it further has a considerable tourist activity.
5. The 'position as at' is considered to be the "1st May, 2004", date of the Accession.
6. As regards to the 'compliance' of networks and treatment plants, it must be noted that :
- a) The basis of the Cyprus report assumes that a collecting system is in compliance when that is connected to a UWWT plant. That is, Pelendri agglomeration (CY504) has in place its collecting system, but since it is not connected to a UWWT plant yet, then the network is not considered to be in compliance.
 - b) Furthermore, if an agglomeration has more than 80-85% of its nominal load collected and treated, then its collecting network is considered to be in compliance (not yet applicable for Cyprus).
7. As regards to the identification of 'sensitive areas' Cyprus has identified two (2) areas 'the Polemidhia Storage Reservoir' and the 'Coastal area between Cape Pyla and Paralimni'. Since in the first one there is discharge from the Greater Limassol Agglomeration (CY51) with a population equivalent above 10.000, it is considered sensitive for the purpose of the Directive. In the second one, there are no discharges from agglomerations with population equivalent of more than 2.000, since the treated wastewater is re-used and hence it is not considered sensitive for the purpose of the directive.
8. It should be noted that the format of the Implementation Programme set out in Decision 93/481/EEC of 28 July 1993, does not allow for any Discharge Point other than Water Body (e.g. Land Discharge, e.g. wastewater re-use). Cyprus mostly reuses all of its wastewaters and hence has added on the Tables a third column named 'Discharges on Land'.

9. In the case where an agglomeration has more than one discharge area, Cyprus approach was to classify this agglomeration in all the discharged areas. For example, in the case of CY 51 - Greater Urban Limassol agglomeration with population equivalent 145.000, there are 3 discharge areas, in different proportions:

- Freshwater and estuaries, sensitive area (13%= approx. 19.000 p.e.)
- Coastal waters, normal area (33%= 48.000 p.e.)
- Land Discharges, normal area (54% = 78.000 p.e.)

For the purpose of this report, CY51 agglomeration was classified under all the respective discharged areas according to the proportions indicated above, until the final format of the reporting is clarified through the Workshops by the Committee.

10. Regarding the progress of the Implementation Programme it should be noted that whilst the Cyprus Treaty Implementation Programme document indicated that until the 1st May 2004 there would be a considerable % of agglomerations in compliance, this % has not been achieved for the following technical reasons:

- a) Tenders for the "design and production of tender documents" for 28 agglomerations with population equivalent more than 2.000 have been funded under Pre-accession funds by EU, (National Programme 2001, Project CY01.01.01.01). Hence tendering, evaluation and contracting followed the procedures of the EEC, which took much longer than originally planned under the initial Programme, based on local tendering and financing procedures (started in February 2002 and completed in January 2005).
- b) An application was made through the Cohesion Fund to secure funding for the construction of the networks and UWWT plants for 10 agglomerations, which would mean compliance with the EEC tendering procedures and there was a small delay in tendering these 10 projects.
- c) A new law No. 57(I)/2001 has been put in force in Cyprus since the year 2001, in harmonization with the Directive for the Environmental Impact Assessment 85/337/EEC, as modified by the Directive 97/11/EC. The procedures stipulated in this Law have to be followed without any derogation, including publishing announcements, public presentations, receiving public opinions etc.

Besides the technical problems, one very important parameter extending the required time for the Implementation Programme is the imperative need to secure public acceptance and agreement regarding the location of the treatment plants. Mainly in all the 44 agglomerations, design has been completed and the most difficult task was (and for some still is) the identification of a broadly acceptable location for the UWWT plants.

Nevertheless, the milestones of interim targets (2008,2009,2011 and TP 2012) remain unchanged in the revised Implementation Programme, since Cyprus is committed to reach these targets.

TREATMENT PLANTS

MEMBER STATE: **CYPRUS**

TABLE 5.1

PROGRAMME FOR THE IMPLEMENTATION OF ARTICLE 5(4) IN EACH SENSITIVE AREA

Position as at the end of the year indicated

Year	Total number of urban waste water treatment plants in the area concerned	Total corresponding load in population equivalent	Percentage of reduction for total phosphorus	Percentage of reduction for total nitrogen
2004				
2012				

AS APPROPRIATE FOR THE APPLICATION
OF ARTICLE 5 (8)
TREATMENT PLANTS

MEMBER STATE: **CYPRUS**

TABLE: 5.1 (a)

PROGRAMME FOR THE IMPLEMENTATION OF ARTICLE 5(4)

Position as at the end of the year indicated

Year	Total number of urban waste water treatment plants in the area concerned	Total corresponding load in population equivalent	Percentage of reduction for total phosphorus	Percentage of reduction for total nitrogen
2004				
2012				

**PROGRAMME FOR THE IMPLEMENTATION OF ARTICLE 14
DISPOSAL AND REUSE OF SLUDGE ARISING FROM URBAN WASTE WATER TREATMENT**

Discharges expressed in tonnes of dry materials

Costs in ECU/tonne ⁽¹⁾

Year \ Discharge	Sludge discharged into surface waters			Sludge reused				Sludge disposed					
	Pipelines	Ships	Others	Soil and agriculture		Others		Landfill		Incineration		Others	
				Quantity (tonnes/year)	Costs ⁽¹⁾	Quantity	Costs ⁽¹⁾	Quantity	Costs ⁽¹⁾	Quantity	Costs ⁽¹⁾	Quantity	Costs ⁽¹⁾
Position as at 1May 2004				5.132						200		650 (stock on site)	
2008										500			
2009				2.300									
2011				400									
2012				3.000									

⁽¹⁾ Optional

PROGRAMME FOR THE IMPLEMENTATION OF THE DIRECTIVE 91/271/EEC**Total amounts (in millions of Ecus) and nature of the investment programmes**

Cumulative investments, as calculated from 1 May 2004 at 2004 prices

Nature of the investments concerned Period covered	Article 3 Collecting systems	Articles 4, 5, 6, 7 and 14 Investment costs for urban waste water treatment plants, sludge treatment plants and disposal plants
from 1984 to 1994 ⁽¹⁾		
from 1994 to 2004 ⁽¹⁾		2.53
from 1 January 2004 to end 2008	22.33	17.18
from 1 January 2008 to end 2009	60.13	25.77
from 1 January 2009 to end 2011	25.77	8.59
from 1 January 2011 to end 2012	210.23	91.10
⁽¹⁾ Completion optional.		

Table 1: Cyprus Revised Implementation Programme 2005 Database

ID No.	No.	Agglomerations		Population census 1992	Population census 2001	1998 Implementation programme P.E.	2005 Revised Implementation programme P.E.	Category per p.e				Category per receiving			Category per catchment			Today in compliance			
								2.000 < 10.000	10.000 < 15.000	15.000 < 150.000	> 150.000	Land	Fresh water and estuaries	Coastal	Sensitive	Less sensitive	Normal area	Population Equivalent	Percentage	In Compliance	
A		Urban Agglomerations																			
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	0	0	5	1	4	2	0	1	0	5	395.833	73%	2	
B		Rural Agglomerations																			
		Nicosia District																			
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	Paliometochos		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	10				10				10	5.000	19%	2		

Table 1: Cyprus Revised Implementation Programme 2005 Database

ID No.	No.	Agglomerations	Population census 1992	Population census 2001	1998 Implementation programme P.E.	2005 Revised Implementation programme P.E.	Category per p.e				Category per receiving			Category per catchment			Today in compliance			
							2.000 < 10.000	10.000 < 15.000	15.000 < 150.000	> 150.000	Land	Fresh water and estuaries	Coastal	Sensitive	Less sensitive	Normal area	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	8				8						8	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	Ormida	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	9	1			10						10	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	6				6						6	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	2				2						2	0	-	0
	36	TOTAL RURAL	74.879	91.753	91.247	130.000	35	1	0	0	36	0	0	0	0	36	11.500	9%	5	
	42	GRAND TOTAL	470.170	564.892	619.247	675.000	35	1	5	1	40	2	0	1	0	41	407.333	60%	7	

Notes: * = additional agglomeration

** = Deleted Agglomeration

= Merged Agglomeration in Greater Urban

Table 2: Breakdown of the Greater Urban Agglomerations

No.	Agglomerations		Population census 1992	Population census 2001	2005 Implementation programme P.E.	Category per p.e			
						2.000 < 10.000	10.000 < 15.000	15.000 < 150.000	> 150.000
1 Nicosia Greater Urban (9 agglomerations)									
1.1	Nicosia Municipality		47.036	47.763	47.000				
1.2	Strovolos Municipality		51.499	58.466	56.000				
1.3	Lakatamia Municipality		20.932	28.466	26.000				
1.4	Aglandjia Municipality		17.495	18.934	17.500				
1.5	Engomi Municipality		9.942	13.617	11.000				
1.6	Latsia Municipality		10.015	12.180	11.500				
1.7	Ayios Dometios Municipality		12.117	12.123	12.000				
1.8	Yeri		4.982	6.423	5.000				
1.9	Tseri	#	4.176	5.268	4.000				
			174.018	203.240	190.000				1
2 Limassol Greater Urban (8 agglomerations)									
2.1	Limassol Municipality		87.136	94.628	90.000				
2.2	Polemihia Municipality		15.985	18.508	17.500				
2.3	Mesa Yetonia Municipality		11.533	13.519	12.500				
2.4	Germasoyia Municipality		5.902	8.494	8.000				
2.5	Ayios Athanasios Municipality		6.930	9.366	9.000				
2.6	Pano Polemithia		3.703	3.749	3.500				
	- Pyrgos	**	901	1.348	-				
	- Pareklissia	**	850	1.328	-				
2.7	Ayios Tychonas		345	2.112	2.000				
	- Moni	**	272	386	-				
2.8	Moutayiaka	*		2.700	2.500				
			133.557	156.138	145.000			1	
3 Larnaca Greater Urban (3 agglomerations)									
3.1	Larnaca Municipality		43.586	46.714	60.000				
3.2	Oroklini		1.957	3.302	5.000				
	Pyla	**	867	1.374	-				
3.3	Livadhia		3.956	4.875	5.000				
			50.366	56.265	70.000			1	
4 Paphos Greater Urban (4 agglomerations)									
4.1	Paphos Municipality		19.452	26.252	55.000				
4.2	Yeroskipou Municipality		4.156	5.486	5.000				
4.3	Empa		2.069	3.678	3.000				
4.4	Chlorakas		2.032	3.154	4.000				
	Kissonerga	**	1.092	1.406	-				
	Konia	**	588	908	-				
	Koloni	**	200	253	-				
	Lemba	**	194	334	-				
	Ahelia	**	74	114	-				
			29.857	41.585	67.000			1	
5 Ayia Napa									
			1.795	2.881	27.500			1	
6 Paralimni									
			7.721	11.101	45.500			1	
GRAND TOTAL URBAN			397.314	471.210	545.000	0	0	5	1

Notes: * = additional agglomeration

** = Deleted Agglomeration

= Merged Agglomeration in Greater Urban