

TRANSPORT

THEME 7 - 3/1999

Contents

Sea and air are main means of exchange between the EU and the MED countries.....2

Countries with short road networks have high road densities and high rates of motorisation... 2

Variations in passenger traffic are stronger than those in goods carried by rail3

Safety on roads has improved in most MED countries5

Air passenger traffic has considerably increased in the region, but at different rates.....5

Maritime passenger traffic remained stable within the MED region, while maritime freight traffic is usually growing......6



Manuscript completed on: 23.07.1999 Catalogue number: CA-NZ-99-003-EN-I

© European Communities, 1999

Recent transport trends in the MED countries

Evangelos Pongas

In 1997...

EU trade with the MED countries involved the carriage of about 163 million tonnes of goods with a value of over 110 billion Ecu.

About 18 million road vehicles were registered in the MED countries as a total, i.e. about 82 total vehicles and 52 passenger cars every 1,000 inhabitants.

An estimated 25,422 were killed in road accidents in the MED region corresponding to 1.15 killed per 10,000 inhabitants in the region as a whole.

Railways, which are operating only in half of the south and east Mediterranean countries, carried about 1.2 billion passengers and 92 million tonnes of goods.

Air traffic involved over 86 million passengers and 869 thousand tonnes of freight and post carried to or from the MED countries (excluding Jordan)

Over 8.5 million passengers and 421 million tonnes of freight were handled in south and east Mediterranean ports.

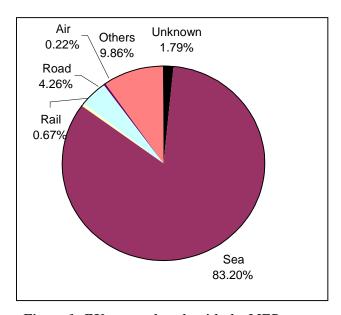


Figure 1: EU external trade with the MED countries in tonnes by mode of transport This statistics in focus was prepared within the framework of the MED-

TRANS project under the responsibility of Aline Pennisi, CESD-Roma.

Sea and air are main means of exchange between the EU and the MED countries

The twelve MED countries cover a total area of about 5.4 million square kilometres and are home to population of about 222 million people. The biggest country in terms of area is Algeria with over 2.4 million square kilometres of land (covering alone nearly half of the total MED area), and Malta is the smallest with only 316 square kilometres. Population density varies

Table 1: Area and population

Country	Area (km²)	Population (in thousands)	Population Density (inh. per km²)
DZ	2 381,741	29 050	2
CY ¹	9 251	657 900	71
EG	1 001,450	60 000	60
IL	22 145	5 900	266
JO	89 342	4 600	51
LB	10 452	4 005	383
MT	316	377	1 191
MA	710 850	27 310	38
PNA	5 997	2 838	473
SY	185 180	15 100	82
TN	155 410	9 154	59
TR	814 578	62 510	77
MED	5 386,712	221 501	41.12

^{1.} Area refers to the whole island; population only to Government controlled area

considerably from country to country, ranging from as low as 12 inhabitants per square kilometre in Algeria to as high as 1,191 inhabitants in Malta.

In 1997, EU trade with the MED countries involved the carriage of about 163 million tonnes of goods with a value of over 110 billion Ecu. 83% of the EU trade with the MED countries in terms of tonnes was handled by sea and 0.2% by air, but, in terms of value, only 53% of the EU trade with the MED countries was transported by sea and up to 16% by air. Trade handled by road represented only 4.24% of the trade in tonnes and about 23% of the trade in terms of value.

With the exception of the Nile in Egypt, none of the MED countries have significant inland waterways. Several countries do not have railway transport either (Malta, Cyprus, Palestine, Lebanon). Oil pipelines are operated in Jordan, Algeria, Morocco, Tunisia, Egypt, Turkey and Israel. Road remains the main mode of domestic transport in all countries for both passengers and freight, although in Egypt, Turkey, Algeria and Morocco railways also handle a large amount of traffic.

Countries with short road networks have high road densities and high rates of motorisation

About 683 thousand kilometres of roads stretch across the MED region. The 382 thousand kilometre long road network in Turkey covers by itself about 64% of the total length of roads in the region, although its density is not greater than 469 km/1000 sq.km. On the other hand, Malta offers a less than 2 thousand kilometre road network, but has by far the greatest road density (698 km/per 1,000 km²). Mountainous regions usually require longer roads than plains and road density patterns tend to follow population density, as roads tend to be more developed where people live and economic activities thrive. This usually occurs in the MED region, although when compared to the countrys' ranking in

terms of population density, Algerias' road network appears rather poorly developed (42 km/1,000 km²) and Cyprus' highly developed (1 152 km/1,000 km²).

Roughly 18 million road vehicles were registered in the whole of the MED in 1997, i.e. about 82 total vehicles and 52 passenger cars every 1,000 inhabitants. Malta (472) and Cyprus (357), are the countries with the greatest number of passenger cars per 1,000 inhabitants, followed by Lebanon (312) and Israel (212), while the lowest values are registered in Syria (11) and Egypt (24).



Table 2: Road infrastructure and equipment

	Roa	d network	oad vehicles		
Country	Length (km)	Density (km/1000 km²)	Total road vehicles (thousands)	Passenger cars (thousands)	Rate of motorization
DZ	100,992	42.4	2,789.5	1,615.1	56
CY	10,654	1,151.66	402.6	235.0	357
EG	44,498	44.43	2,730.0	1,431.9	24
IL	15,464	698.31	1,616.8	1,252.0	212
JO	7,519	84.16	306.7	190.0	41
LB	6,359	608.4	1,510.8	1,250.5	312
МТ	1,972	6,240.51	245.0	177.7	472
MA	57,520	80.92	1,446.0	1,060.3	39
PNA	2,055	342.6	160.4	120.6	43
SY	41,451	223.84	539.1	168.4	11
TN	18,997	122.24	701.0	415.8	45
TR	382,000	468.95	5,810.1	3,570.0	57
MED	683,122	128	18,258.0	11,487.3	52

^{1.} The rate of motorization is calculated as number of passenger cars per 1,000 inhabitants

Table 3: Railway infrastructure and traffic of passengers and goods

Country	Length of railway lines (km)	1994 passengers by rail (thousands)	1997 passengers by rail (thousands)	% variation rail passengers in 1994-1997	1994 goods by rail (thousand tonnes)	1997 goods by rail (thousand tonnes)	1994-1997 % variation goods by rail
DZ	4,219	50,241	38,102	-24.16	9,430	7,927	-15.94
EG	4,810	982,248	1,046,589	6.55	12,240	11,566	-5.51
IL	962	4,281	5,919	38.26	8,909	8,639	-3.03
JO ¹	386	36	24	-33.44	3	3	-0.89
MA	1,907	9,881	11,519	16.58	28,142	28,818	2.40
SY	2,767	1,971	1,132	-42.57	4,040	4,939	22.25
TN	1,860	28,272	31,487	11.37	11,789	12,311	4.43
TR	8,607	119,533	107,053	-10.44	14,675	17,405	18.60
MED	20,708	1,196,463	1,241,825	3.79	89,228	91,608	2.67

^{1.} Data for Jordan refers to Hijazi railway company only

Variations in passenger traffic are stronger than those in goods carried by rail

The length of the railway network in the whole of the MED region does not exceed 21 thousand kilometres of lines, i.e. no more than 5.51 km. of lines per 1,000 sq. km. Railways were never constructed in Cyprus or in Malta where the road network is sufficient to serve domestic transportation. In Lebanon and in Palestine, rail infrastructure used to be operated, but in the last 50 years the tracks have been dismissed and finally destroyed or abandoned.

Turkey boasts the most extended rail infrastructure with a 8.6 thousand km. long network, while Israel (962 km) and Jordan (only about 386 km) present the shortest lines. However, in terms of density, Israels' rail network is the most developed consisting of 43.44 km/1,000 sq. km. Algerias' 4.3 thousand km long rail network is the less dense with only 1.77 km/1,000 sq. km, closely followed by Morocco (2.68 km/1,000 sq. km) and Jordan (4.32 km/1,000 sq.km).



Egypt stands out as the most important rail carrier of passengers, with a traffic of over 1,047 million passenger in 1997. This is nearly ten times more than the number of passengers travelling by rail in Turkey and many times more than those carried by rail in any of the other countries. However, when it comes to goods, Morocco handles twice as much as Egypt, reaching 28,818 thousand tonnes against 11,566 thousand in respect. Railway trends are not uniform in the MED region: countries that have registered a drop of

passenger traffic have also shown an increase of goods transported by rail. Passengers carried by rail have increased only in Israel (38%), Morocco (16%) and Tunisia (11%), while they have decreased even strongly in the other countries (from 42% in Syria to 10% in Turkey). Moreover, goods traffic has increased significantly in Syria (22%) and Turkey (18%), and to a smaller degree in Tunisia (4%) and Morocco (2%).

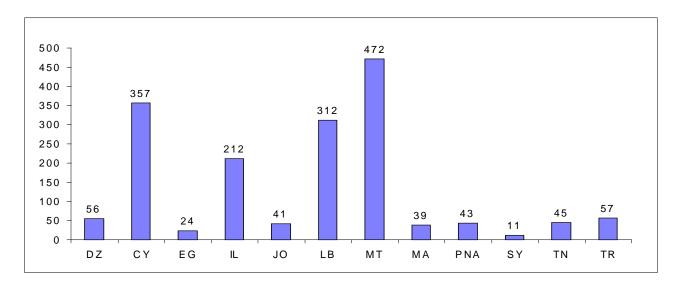


Figure 2: Passenger cars per 1,000 inhabitants, 1997

Table 4: Killed in road accidents

Country	Killed in road accidents 1994	Killed in road accidents 1997	1994-1997 % variation	Killed per 10,000 inh. 1994	Killed per 10,000 inh. 1997
DZ	4,036	3,530	-12.54	1.39	1.22
CY	133	115	-13.53	2.02	1.75
EG	n.a.	6,988	n.a.	n.a.	1.16
IL	539	530	-1.67	0.91	0.90
JO	443	577	30.25	0.96	1.25
LB	n.a.	482	n.a.	n.a.	1.20
MT	6	18	200.00	0.16	0.48
MA	3,605	3,081	-14.54	1.32	1.13
PNA ¹	177	180	1.69	0.62	0.63
SY	1,751	1,696	-3.16	1.16	1.12
TN	1,291	1,307	1.24	1.41	1.43
TR	8,022	6,919	-13.75	1.28	1.11
MED		25,422		0.90	1.15

^{1.} Figures for 1994 refer to 1993 data instead.



Safety on roads has improved in most MED countries

An estimated 25,422 were killed in road accidents in the MED countries in 1997, representing a ratio of 1.15 killed per 10,000 inhabitants in the region as a whole. Fatalities per inhabitant seem particularly high in Cyprus (1.75), Tunisia (1.43), Jordan (1.25), Algeria (1.22) and Lebanon (1.20). Since 1994, safety on roads has

generally increased in at least half of the MED countries and is slightly considerably increased in Morocco (-15%), Turkey (-14%) and Cyprus (-14%). A dramatic increase in the number of killed in road accidents can be observed in Jordan (30%) and Malta (where the number of killed is still very small).

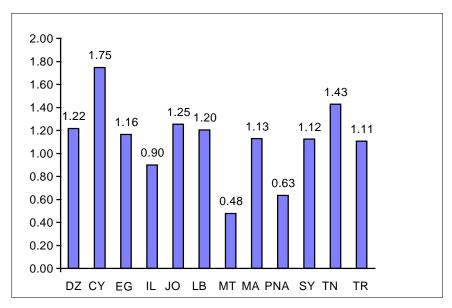


Figure 3: Killed in road accidents per 10,000 inhabitants, 1997

Air passenger traffic has considerably increased in the region, but at different rates

Air traffic involved over 86 million passengers and 869 thousand tonnes of freight and post carried to or from the MED countries (excluding Jordan) in 1997. Air

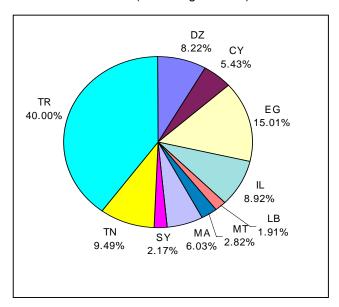


Figure 4: Passengers travelling to or from MED countries by air, 1997

passenger traffic has increased everywhere (with the only exception of a very slight 1.01% decrease in Malta) since 1994. Major increases occurred in Turkey (54%) and Egypt (38%). The amount of freight carried by air has not followed the same trend as it has increased significantly only in Syria (84%), Turkey (33%), Egypt (28%) and Malta (15%).

In 1997, Turkish airports handled alone about 40% of the total departures and arrivals air passengers in the MED region. Egypt (15%), Tunisia (9%), Israel (9%) and Algeria (8%) followed in the scale of major origins or destinations by air, while Lebanon (2%) and Syria (2%) represent the smallest share.



Maritime passenger traffic remained stable within the MED region, while maritime freight traffic is usually growing

In 1997, over 421 million tonnes of freight and 8.5 million passengers were handled in south and east Mediterranean ports. Turkish (138 million tonnes) and Algerian (90 million tonnes) ports globally operated over half of the total loaded and unloaded freight. With about 2 million passengers, Turkish ports also accounted for the largest share of maritime passenger traffic, followed by Moroccan and Egyptian ports, but way ahead of the Algerian (only 391 thousand).

Between 1994 and 1997, the number of passengers (excluding cruises and stopovers) has doubled in Syria

and increased about 40% in Algeria. However, the increase in sea passengers registered in some countries was balanced by the decrease registered in Jordan (-37%), Israel (-30%), Malta (-17%) and Cyprus (-14%), so that the overall trend in the MED region was not greater than +1.61. Maritime freight traffic globally increased up to 15%, with Turkish ports (42%) registering the strongest positive variation and Syrian ports (-70%) the strongest negative one. Most other countries registered an increase of goods handled in their ports, although it was not greater than 20%.

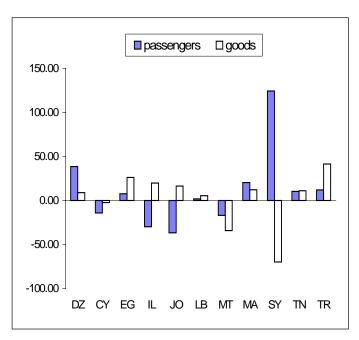


Figure 5: Maritime traffic trends, 1994-1997, % variation

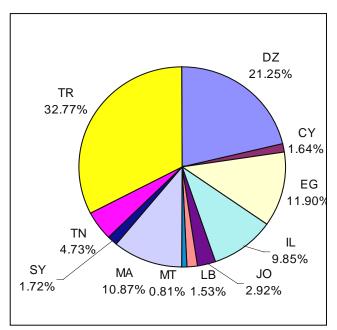


Figure 6: Tonnes of freight handled in the MED ports, 1997



Table 5: Air and sea traffic

	Air traffic				Sea traffic			
	Passengers (excluding transit) In thousands		Freight and mail In thousand tonnes		Passengers (excluding cruises) In thousands		Freight In million tonnes	
	1994	1997	1994	1997	1994	1997	1994	1997
DZ	6,841.9	7,065.6	38.8	27.2	282.5	391.5	82.2	89.5
CY	4,391.0	4,672.7	34.4	32.1	835.0	716.8	7.1	6.9
EG ¹	9,357.5	12,906.9	105.4	135.1	1,825.7	1,964.5	39.7	50.1
IL	7,345.1	7,674.0	242.3	276.1	107.0	75.0	34.6	41.5
JO	n.a.	n.a.	n.a.	n.a.	1,364.1	863.6	10.6	12.3
LB	1,438.3	1,645.5	54.0	46.5	13.3	13.5	6.1	6.4
MT	2,447.0	2,422.2	10.1	11.7	228.0	189.3	5.2	3.4
MA	4,488.5	5,188.1	49.8	49.9	1,564.6	1,882.8	40.8	45.8
PNA	-	-	-	-	-	-	-	-
SY	1,440.2	1,861.9	20.6	37.8	9.4	21.0	24.0	7.2
TN	6,840.7	8,164.8	32.3	31.1	288.5	318.3	17.9	19.9
TR^2	22,334.0	34,396.3	166.3	221.2	1,802.0	2,017.3	97.6	138.0
MED ³	66,924.2	85,998.1	754.0	868.8	8,320.0	8,453.6	365.8	421.2

^{1.} Figures for passengers by sea refer to 1996 instead of 1997

> ESSENTIAL INFORMATION - METHODOLOGICAL NOTES

The data presented here on transport infrastructure, equipment and traffic of passengers and goods was collected with the co-operation of the National Statistical Institutes of the MED countries within the framework of the MED-TRANS project.

Abbreviations

The MED countries are twelve countries on the south and east shores of the Mediterranean basin including Morocco (MA), Algeria (DZ), Tunisia (TN), Egypt (EG), Israel (IL), Palestine (PNA), Jordan (JO), Lebanon (LB), Syria (SY), Turkey (TR), Cyprus (CY) and Malta (MT).

Road vehicles and road accidents

According to the EU definition, passenger cars are road vehicles for the carriage of passengers with a maximum of 9 seats including the driver, for either private or public use. Where a specification on the number of passenger seats was not available, the sum of private cars and taxis has been taken as the national equivalent of passenger cars. In such case, the real number of passengers might be slightly underestimated.

The EU definition for killed in road accidents refers to deaths due to road accident within 30 days of hospitalisation. This definition does not hold in Egypt, Lebanon, Syria and Turkey where killed in road accidents refers only to deaths on the spot of the accident. The figures for these countries have been adjusted by multiplying by, 1.35, which is standard in the EU in order to obtain comparable data.

In Malta deaths are recorded at the scene of the accident or before discharge from the hospital. This definition is very close to the within 30 days standard and, therefore, no adjustment has been made.

For more information

A more detailed analysis of the transport trends and data availability in the single MED countries is provided in the Eurostat publication *Transport Trends in Mediterranean Countries*.

^{2.} Figures for freight by sea do not include livestock and timber

^{3.} Total for MED air traffic excludes Jordan for both passengers and freight and mail

Further information:

To obtain information or to order publications, data bases and special sets of data, please contact the **Data Shop** network:

BELGIQUE/BELGIË	DANMARK	DEUTSCHLAND	ESPAÑA	FRANCE	ITALIA – Roma	
Eurostat Data Shop Bruxelles/Brussel Chaussée d'Elterbeek 13 Elterbeeksesteenweg 13 B-1049 BRUXELLES / BRUSSEL Tel. (32-2) 299 66 66 Fax (32-2) 295 01 25 E-Mail: datashop.brussels@eurostat.cec.be	DANMARKS STATISTIK Bibliotek og Information Eurostat Data Shop Sejrøgade 11 DK-2100 KØBENHAVN Ø Tel. (45-39) 17 30 30 Fax (45-39) 17 30 03 E-Mail: bib@dst.dk	STATISTISCHES BUNDESAMT Eurostat Data Shop Berlin Otto-Braun-Straße 70-72 D-10178 BERLIN Tel. (49-30) 23 24 64 27/28 Fax (49-30) 23 24 64 30 E-Mail: datashop@statistik-bund.de	INE Eurostat Data Shop Paseo de la Castellana, 183 Oficina 009 Entrada por Estébanez Calderón E-28046 MADRID Tel. (34-91) 583 91 67 Fax (34-91) 579 71 20 E-Mail: datashop.eurostat@ine.es	INSEE Info Service Eurostat Data Shop 195, rue de Bercy Tour Gamma A F-75582 PARIS CEDEX 12 Tel. (33-1) 53 17 88 44 Fax (33-1) 53 17 88 22 E-Mail: datashop@insee.fr	ISTAT Centro di Informazione Statistica Sede di Roma, Eurostat Data Shop Via Cesare Balbo, 11a I-00184 ROMA Tel. (39-06) 46 73 31 02/06 Fax (39-06) 46 73 31 01/07 E-Mail: dipdiff@istat.it	
ITALIA – Milano	LUXEMBOURG	NEDERLAND	NORGE	PORTUGAL	SCHWEIZ/SUISSE/SVIZZER	
ISTAT Centro di Informazione Statistica – Sede di Milano, Eurostat Data Shop Piazza della Repubblica, 22 I-20124 MILANO Tel. (39-02) 65 95 133/134 Fax (39-02) 65 30 75 E-mail: mileuro@tin.it	Eurostat Data Shop Luxembourg BP 453 L-2014 LUXEMBOURG 4, rue A. Weicker L-2721 LUXEMBOURG Tel. (352) 43 35 22 51 Fax (352) 43 35 22 251 E-Mail: dslux@eurostat.datashop.lu	STATISTICS NETHERLANDS Eurostat Data Shop-Voorburg po box 4000 2270 JM VOORBURG Nederland Tel. (31-70) 337 49 00 Fax (31-70) 337 59 84 E-Mail: datashop@cbs.nl	Statistics Norway Library and Information Centre Eurostat Data Shop Kongens gale 6 P. b. 8131, dep. N-0033 OSLO Tel. (47-22) 86 46 43 Fax (47-22) 86 45 04 E-Mail: datashop@ssb.no	Eurostat Data Shop Lisboa INE/Serviço de Difusão Av. Antonio José de Almeida, 2 P-1000-043 LISBOA Tel. (351-21) 842 61 00 Fax (351-21) 842 63 64 E-Mail: data.shop@ine.pt	Statistisches Amt des Kantons Zürich, Eurostat Data Shop Bleicherweg 5 CH-8090 Zürich Tel. (41-1) 225 12 12 Fax (41-1) 225 12 99 E-Mali: datashop@zh.ch Internetadresse: http://www.zh.ch/statistik	
SU OM I/FIN LAND	SVERIGE	UNITED KINGDOM	UNITED KINGDOM	UNITED STATES OF AMERICA		
Eurostat Data Shop Helsinki Til astokirjasto Postiosoite: Pt 2B Käyntiosoite: Tyopajakatu 13 B, 2 krs FIN-00022 Tilastokeskus Tel. (358-9) 17 34 22 21 Fax (358-9) 17 34 22 27 S-posti datashop.tilastokeskus@tilastokeskus.fil Internetadresse: http://www.tilastokeskus.filk/kk/datashop.html	STATISTICS SWEDEN Information service Eurostat Data Shop Karlavägen 100 BOX 24 300 S-104 51 STOCKHOLM Tel. (46-8) 50 69 48 01 Fax (46-8) 50 69 48 99 E-Mail: infoservice@scb.se	Eurostat Data Shop Enquiries & advice and publications Office for National Statistics Customers & Electronic Services Unit 1 Drummond Gate - B1/05 UK-LONDON SWTV 200 Tel. (44-171) 533 56 76 Fax (44-171) 533 56 88 E-Mali: gloria.ryan@ons.gov.uk	Eurostat Data Shop Electronic Data Extractions, Enquiries & advice - R.CADE Unit 1L Mountjoy Research Centre University of Durham UK - DURHAM DH1 3SW Tei: (44-191) 374 7350 Fax: (44-191) 384 4971 E-Mail: <u>r-cade@dur.ac.uk</u> URL: http://www-rcade.dur.ac.uk	HAVER ANALYTICS Eurostat Data Shop 60 East 42nd Sireet Suite 3310 USA-NEW YORK, NY 10165 Tel. (1-212) 986 93 00 Fax (1-212) 986 58 57 E-Mail: eurodata@haver.com		
Media Support Eurostat (for profession Park Building Office A 2/49 - 1, 2020 Luc	onal journalists only). xembourg • Tel. (352) 4301 33408 • Fax (252) 4201 22440 - o mail: madia cunnart	@coc ou int			
Tel. (352) 4301 34723 ORIGINAL: English	s, Eurostat/C2, L-292 3, Fax (352) 4301 3226	89, E-mail: evangelos				
Please visit our web site a	http://europa.eu.int/euros	stat.html for further informa	tion!			
A list of worldwide sales ou 2 rue Mercier – L-2985 Luxembourg Tel. (352) 2929 42118 Fax (352) 2929 4 Internet Address http://leur-op.eu.int/fr e-mail: info.info@opoce.cec.be	BELGIQUE/BEI 12709 PORTUGAL - 1 1general/s-ad.htm EESTI - HRVA	LGIË – DANMARK – DEUTSCHLAND – SUOMI/FINLAND – SVERIGE – UNITEI TSKA – MAGYARORSZÁG – MALTA –) KINGDOM – ÍSLAND – NORGE – SCI	CE – IRELAND – ITALIA – LUXEMBOUF HWEIZ/SUISSE/SVIZZERA – BALGARIJ/ /AKIA – SLOVENIA – TÜRKIYE – AUSTF	A – CESKÁ REPUBLIKA – CYPRUS	
Ord	er form			ee copy of 'Eurostat Mini-Gu' n of Eurostat products and s DE EN FR		
	Statistics in focus (from 1.1 es office addresses see abo		☐ I would like a free su letter on Eurostat pro Language required:		rences', the information	
☐ Formula 1: All 9 ther	nes (approximately 90 issue	es)	□ Mr □ Mrs	☐ Ms		
☐ Paper:	360 EUR		(Please use block capitals			
	264 EUR			First name:		
☐ Paper + PDF:				Department:		
Language requi	red: DE EN I	FR				
☐ Formula 2: One or n	nore of the following seven t	hemes:		Town:		
☐ Theme 1 'Gene	ral statistics'					
☐ Paper: 42 E	JR 🗖 PDF: 30 EUR 🗖 (Combined: 54 EUR		Fax:		
☐ Theme 2 'Econ			E-mail:			
	lation and social conditions'		Payment on receipt of in	voice, preferably by:		
☐ Theme 4 'Indus	try, trade and services		☐ Bank transfer			
☐ Theme 6 'Exter			☐ Visa ☐ Euroca			
☐ Theme 8 'Envir	onment and energy			Expires on a-Community VAT number		
·	JR PDF: 60 EUR () (red: DE EN ()		If no number in entered, VA reimbursement will not be p	T will be automatically applied	d. Subsequent	