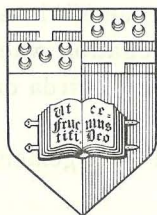


# THE UNIVERSITY OF MALTA



## GAZETTE

VOL. 17 No. 2

JUNE 1985



## Contents

- |    |   |
|----|---|
| 17 | Graduation Ceremony   |
| 19 | International Conference on the Economic Development of Small Countries |
| 20 | XVIth International Congress on Pirandellian Studies                    |
| 20 | Week of American Culture  |
| 21 | Meeting of the Council of the Community of Mediterranean Universities   |
| 21 | The Professional Development of Teachers                                |
| 22 | Study Visit to Yugoslavia   |
| 22 | Activities by the Extension Studies Board                               |
| 23 | Faculty of Management Studies – Dissertations Supplement                |

## GRADUATION CEREMONY

The Chancellor of the University, H.E. Miss Agatha Barbara and the Hon. Prime Minister and Minister of Education, Dr. Karmenu Mifsud Bonnici honoured the Congregation when they attended a Graduation Ceremony held at the Assembly Hall, The University, Msida on Friday, 12th April, 1985.

Following an address by Professor E. Scicluna, Head of the Department of Management Studies, the Rector, Professor G.P. Xuereb conferred the following degrees:

### Doctor of Laws — LL.D.

BUHAGIAR Mary Anne

### Master of Arts — M.A.

#### *Philosophy*

BORG Carmel E.

#### *Maltese*

GATT Eric C.

#### *Social Studies*

MIFSUD Paul V.

#### *English*

\*CATANIA Saviour

### Bachelor of Education (Honours) — B.Ed.(Hons.)

ATTARD Mary

AZZOPARDI Alexandra

BEZZINA Leonard

BONETT Joseph

BONNICI Pierre

BUHAGIAR Michael

CAMILLERI Margaret

CARUANA Paul

CARUANA Philip

DALMAS Maria Stella

DEBATTISTA Carmen

FALZON Victor

GALEA Elizabeth

GRECH Josephine Anne

GRIMA Charles

MAMO Raymond

MIFSUD M'Luciana

MUSCAT Miriam

SAMMUT Cynthia

SCICLUNA Maria Anna

SPITERI Alfred

### Bachelor of Electrical Engineering (Honours) — B.Elec.Eng.(Hons.)

AZZOPARDI Eric

BALDACCHINO Saviour

CARABOTT Maria Theresa

FALZON Mario

FARRUGIA Raymond

MONTANARO Paul

MUSCAT Carmen

PIZZUTO Martin

SCIORTINO Mario

XUEREb Marina

### Bachelor of Mechanical Engineering (Honours) — B.Mech.Eng.(Hons.)

ATTARD Godfrey

CAMILLERI Alfred

CAUCHI Brian

GATT Ronald

PACE Joseph

VASSALLO Anton

VASSALLO Raymond

**Bachelor of Arts (Honours) in Accountancy – B.A.(Hons.) Accountancy**

AQUILINA Randolph  
 AZZOPARDI Joseph  
 BALDACCHINO Vincent  
 BORG Mario  
 BRIFFA Albert  
 BUHAGIAR Camel  
 BUTTIGIEG Francis  
 CHAPPELL Neville  
 FARRUGIA Joseph  
 GRECH Francis  
 MAGRO Alexander  
 MALLIA Mario

MANGION Mark  
 MERCIECA Tonio  
 MUSCAT Jean Pierre  
 MUSCAT SCERRI Juanita  
 PACE Godwin  
 ROSSO Publio  
 STAFRACE Raymond  
 TRIGANZA Alfred  
 VELLA Brian  
 VELLA Michael  
 ZAHRA Lawrence  
 ZAMMIT Edward

**Bachelor of Arts (Honours) in Business Management – B.A.(Hons.) Business Management**

BARON Martin  
 \*BONNICI Joseph  
 CAMILLERI Peter  
 CARUANA Albert  
 CASSAR Mario  
 FARRUGIA Anton

FELICE Harold  
 \*IWANIK Christopher  
 \*STAFRACE Pierre  
 TABONE Edmund  
 VELLA Paul  
 ZAHRA Dorothy

**Bachelor of Arts (Honours) in Public Administration – B.A.(Hons.) Public Administration**

AZZOPARDI Joseph  
 \*BONETT Margaret  
 \*CALLEJA John  
 CARUANA Joseph  
 CILIA Robert  
 DEBONO Joseph  
 DEBONO Marcelle

GATT John  
 INGUANEZ Camel  
 \*LIBRERI Paul  
 MINTOFF Edith  
 MUSCAT Raymond  
 SANT John  
 VASSALLO Joseph

The Rector also awarded the following Diplomas:

**Diploma of Notary Public – N.P.**

BARTOLO Anthony  
 BONDIN Franco  
 BONNICI Ann  
 BONNICI Keith  
 BUGEJA Mario  
 BURLÒ Marco  
 BUSUTTI Graham  
 BUTTIGIEG Eugene  
 CAMILLERI Josella  
 CANNATA Joseph  
 CARONARO Peter  
 CARUANA Michael  
 CASSAR Dominic  
 CILIA Joseph  
 ELLIS Joseph  
 ELLUL Cora A.  
 FARRUGIA Christian  
 FENECH Tonio  
 FENECH ADAMI Raphael  
 FSADNI Ivan

GAUCI Gotthard  
 GRECH Hilary  
 GULIA Gabrielle  
 HAYMAN John  
 HERRERA Jose  
 LA ROSA Clyde  
 LIA Joseph  
 MALLIA Anna M.  
 MANGION Robert  
 MEILAK Stefan  
 MICALLEF Evelyn  
 MICALLEF STAFRACE Simon  
 MICALLEF STAFRACE Yana  
 MIFSUD Melvyn  
 PFRICI-CALASCIONE Alex.  
 PISANI Paul G.  
 SCIBERRAS Rosella  
 XUERE Michael  
 \*MIFSUD BONNICI Anton

## INTERNATIONAL CONFERENCE ON THE ECONOMIC DEVELOPMENT OF SMALL COUNTRIES

An International Conference on the Economic Development of Small Countries was held between 22nd and 24th May, 1985.

The purpose of the Conference was:

- (a) to identify and analyse obstacles relating to the economic development of small countries;
- (b) to discuss policy implications associated with such obstacles;
- (c) to develop models related to industrialisation and trade of small developing countries.

During the Conference the following papers were read:

Jack Jacobs Former Fellow and Director of Studies, Institute of Development Studies, University of Sussex	Administrative Problems of Small Countries and their Solution, with special reference to manpower planning. The view of a non- economist
B. Persaud Director, Economic Affairs Division, Commonwealth Secretariat, UK	Basic Characteristics of Small Countries, and their implications for growth and devel- opment
Philippe L. Hein Responsible for Activities concerning Island Developing Countries, with UNCTAD's Special Programme for the Least Developed, Land-locked and Island Developing Countries	The Study of Microstates
François Doumenge Professor of Natural History, National Museum, Paris	Basic Criteria for a Viability Estimate con- cerning small Island States
Edward Scicluna Professor, Department of Management Studies, The University of Malta	Systems Modelling for Small Islands. A Case Study
John Kaminarides Professor of Economics and Director of Business Research, Department of Business Administration and Economics, Arkansas State University, USA	Import Substitution or Export Substitution: A Dilemma facing small Developing Countries
A.C.M. Jansen Small Economies Research Centre, University of Amsterdam, Holland	Problems and Possibilities of an Economic Policy in very small Countries
Lino Briguglio Lecturer of Development Economics, Faculty of Management Studies, The University of Malta	Projections of Labour Supply and Labour Demand for a Small Open Economy.

As a result of this Conference a Steering Committee was set up to look into the possibilities of forming an international organization that will adhere the goals and objectives set by this Conference. Professor Edward Scicluna and Dr. L. Briguglio are members of this Steering Conference.

## XVIth INTERNATIONAL CONGRESS ON PIRANDELLIAN STUDIES

The XVIth International Congress on Pirandellian Studies was held in Malta from 26th to 28th April on the theme *A teatro con Pirandello*. This Congress, which was open to the public, was organized by The University of Malta and the *Centro Nazionale di Studi Pirandelliani* in collaboration with the Italian Cultural Institute.

The Congress was officially opened with introductory speeches by the Rector, Professor G.P. Xuereb, the Director of the Italian Cultural Institute, Professor Mario Sintich and Professor Enzo Lauretta, counsellor delegate of the *Centro Nazionale di Studi Pirandelliani*.

On Friday, 26th April, the following lectures were delivered at the University Assembly Hall:

Professor Nino Borsellino  
University of Rome

*Il teatro di Pirandello*

Professor Claudio Vicentini  
University of Naples

*La poetica drammatica di Pirandello*

Professor Egle Palazzolo and Professor Sarah Zappulla Muscara from the University of Catania spoke on Pirandello's *Il berretto a sonagli* during the afternoon session. The play was produced in the evening by the *Piccolo Teatro Pirandelliano*.

On Saturday, 27th April, the following lectures were held at the Italian Cultural Institute:

Professor Lucio Lugnani  
University of Pisa

*Enrico IV*

Professor Roberto Tessari  
University of Pisa

*Sei personaggi in cerca d'autore*

Professor Nino Borsellino  
University of Rome

*Questa sera si recita a soggetto*

Professor Roberto Alonge  
University of Turin

*I Giganti della Montagna*

The Congress, which was held under the patronage of the *Regione Siciliana Assessorato Beni Culturali-Ambientali e Pubblica Istruzione*, will have a follow-up for Sixth Form and B.Ed.(Hons.) University students with an essay contest on Pirandello's art of staging. The competition winners will be hosted for a short stay at the *Centro Studi Pirandelliani* in Agrigento.

## WEEK OF AMERICAN CULTURE

The Week of American Culture was held in the period Monday, 6th May to Saturday, 18th May at the University Assembly Hall.

The Rector, Professor G.P. Xuereb and the Chargé d'Affaires, a.i., of the Embassy of the USA were present at the inauguration of 'The American Woodcuts Exhibition – Revival and Innovation' by the President of the Republic H.E. Miss Agatha Barbara.

Activities included films, seminars, plays and a jazz concert. Lecturers and students from the Faculty of Education who helped during these activities included Dr. Daniel Massa, Chairman of the Organizing Committee, Mr. Anthony M. Schembri, Conference Secretary, Miss Marisa Calleja and Dr. Peter Vassallo, who spoke on 'Self and Role in Ken Kesey's 'One Flew Over the Cuckoo's Nest'.

## MEETING OF THE COUNCIL OF THE COMMUNITY OF MEDITERRANEAN UNIVERSITIES

The Rector's Delegate for Academic Affairs, Mr. Edward Scerri attended a meeting of Council of the Community of Mediterranean Universities (C.M.U.) at the National Technical University of Athens, on 18th and 19th May, 1985.

The Council decided to fund, amongst others, the following projects submitted by The University of Malta, provided the rule for three signatories is complied with:

Dr. S. Fiorini	Graph Theory
Professor C.J. Farrugia	The Professional Status of Teachers in the Mediterranean
Mr. H. Galea	Improving the Oral Health of 12-year old Children using portable equipment at School – a cost-budget analysis.

Following a proposal by Mr. E. Scerri, supported by the delegates from Spain and Greece, a Committee is to be set up under his chairmanship:

(a) to consider the hydrological sources and alternative sources of energy of the Mediterranean; and

(b) to invite specialists in these fields to advise this Committee with the aim to establish technology transfer between Universities.

The C.M.U. has announced the Mediterranean Prize, which consists of 5,000 U.S. dollars and will be awarded to personalities in the fields of research and culture. The first award will be made in 1986 during the meeting of the Assembly.

Furthermore, a competition based on qualifications is announced for ten scholarships, for students and graduates of Universities within the C.M.U.

## THE PROFESSIONAL DEVELOPMENT OF TEACHERS

The Faculty of Education is organizing a series of short intensive courses aimed at helping teachers to keep abreast with professional developments in their various areas of interest. Two separate courses were offered in the four weeks between Monday, 20th May and Friday, 14th June, 1985 in the following areas:

### (1) *The Communicative Teaching of English at Primary Level*

The main objective of this course was to examine the implications and relevance of the communicative approach to English language teaching at primary level. Issues discussed during workshop sessions included: (i) transforming traditional syllabuses into communicative ones; and (ii) constructing practical examples of communicative language teaching for participants' own use.

Lectures were delivered by Mr. D. Cuschieri and Dr. Marie Azzopardi.

### (2) *Audio-Visual Methods in Education*

The objectives of this course was to provide the participants with:

- (a) a good knowledge of the range of educational aids;
- (b) a fundamental knowledge of communication models;
- (c) an ability to select and apply an aid and/or method to suit particular learning needs;
- (d) a knowledge in the techniques of reprographics;
- (e) an ability to put into practice a systematic multi-media and multi-method approach to education.

Lectures were given by Mr. George Bonnici.

These courses were run on workshop lines and were of a practical and participative nature.

Professor C.J. Farrugia, Chairman of the Faculty of Education, was the programme coordinator.

## STUDY VISIT TO YUGOSLAVIA

In April, a group of 24 worker-students undergoing a three-year Diploma Course in Labour Studies at the University of Malta spent a week's study visit in Yugoslavia. About half of these students are Drydocks' employees. The others are employed in various Government departments and parastatal and private enterprises. The Diploma is being run by the Workers' Participation Development Centre under the auspices of the Faculty of Management Studies of the University of Malta.

This visit, which was sponsored by UNESCO, had been organised to enable the students to study the participatory system of self-management practised in Yugoslavia. The International Center for Public Enterprise (ICPE), whose headquarters are in Ljubljana, acted as host to the students as well as coordinating and organising this week's study programme. Two Yugoslav professors were at the disposal of the group for lectures and evaluations.

As part of their study programme, the students visited a number of participatory enterprises including a publishing house, an engineering instruments factory and a shipyard at Rijeka.

The workers-students were accompanied by two group leaders, Saviour Rizzo and Godfrey Baldacchino and Dr. Edward L. Zammit, Chairman of the Workers' Participation Development Centre, who is the Co-ordinator of the Diploma Course in Labour Studies.

## ACTIVITIES BY THE EXTENSION STUDIES BOARD

### *Know Your Music (March-June 1985)*

The following lectures were delivered by Mro. Joseph Vella, B.Mus.(Dunelm), F.L.C.M. at the Assembly Hall, The University of Malta, Msida:

The ABC of music

The architecture of music: basic forms

The architecture of music: extended forms

The sound of music, and how it is made

The orchestra

On conductors and conducting

Baroque, Classical, Romantic and all that jazz

Listening to music

The modern composer - what he tries to do, and how

Music in Malta: an outline history

### *Maltese Contemporary Art*

Lectures on The Art of Contemporary Maltese Artists were held at the Old University Building, Valletta, as follows:

Josef Kalleja

Vincent Apap

Esprit Barthet

Envin Cremona

Antoine Camilleri

Frank Portelli

Mr. Dominic Cutajar

Mr. Dominic Cutajar

Dr. Kenneth Wain

Mr. Dominic Cutajar

Mr. Emanuel Fiorentino

Dr. Kenneth Wain



*Gardening and Horticulture*

A series of talks on interesting topics was delivered by Mr. Peter Caruana at the Paola Youth Centre:

X'inhi l-ħamrija

X'inhu l-ġnien, għalfejn iservi, kif isir u jitqassam

Kwalità ta' siġar addattati għall-ġonna – Ċitnu u Frott Irqieq

Hxejjex għall-mejda; fejn, kif, fond, ħamrija, distanza, tahwil eċċ.

Xtieli tal-fjuri fil-ġonna u fil-qsari – annwali u biennali

Xtieli li jżommu l-aktar. Tniissil.

*Public Lecture – 'Schubert to Debussy'*

On Monday, 27th May, 1985 Mr. Godfrey Jackson F.R.N.C.M., Mus.B., G.R.S.M., Assistant Head of Academic Studies at the Royal Northern College, Manchester, delivered a two-hour lecture on the two music composers Schubert and Debussy at the Assembly Hall, The University of Malta, Msida.

*Principles of Economics and Political Theory*

Dr. Lino Briguglio and Dr. Joe Friggieri delivered a course of twelve lectures on Principles of Economics and Political Theory in the period 27th June to 6th July. This Course, which was organised in conjunction with The Circolo Gozitano, was held at the Circolo Gozitano, Victoria, Gozo.

## FACULTY OF MANAGEMENT STUDIES DISSERTATIONS

**B. A. (Hons.) Accountancy**

NAME OF STUDENT	TITLE OF DISSERTATION	SUPERVISORS
AQUILINA Randolph	Unusual and prior period items in Income Statement presentation	Mr. C. Francalanza
AZZOPARDI Joseph	The harmonization of published accounts in Europe	Dr. J. Borg Professor D. Darmanin
BALDACCHINO Vincent	A critical analysis of the Malta Drydocks Budget	Mr. J. Kenely Mr. P. Baldacchino
BORG Mario	Deductions for Income Tax purposes: Capital against Income	Mr. E. Vella
BRIFFA Albert	Accounting for leases	Mr. C. Francalanza
BUHAGIAR Carmel	Operations Budget preparation procedure in the airline industry with particular reference to AirMalta Co. Ltd.	Mr. C. Francalanza Mr. J. Kenely
BUTTIGIEG Francis	The Qualified Accountant: Role perception within the Business community in Malta	Mr. L. Soler Mr. C. Francalanza
CHAPPELL Neville	Cash Flow: Planning, forecasting and control	Mr. C. Francalanza
FARRUGIA Joseph	Audit of Small Firms in Malta	Mr. P. Baldacchino Mr. L. Soler



NAME OF STUDENT	TITLE OF DISSERTATION	SUPERVISORS
GRECH Francis	Interfirm Comparison for Management	Mr. C. Francalanza Mr. J. Vella Bondin
MAGRO Alexander	Accounting Information within the small firm – an evaluation of current practice in Malta	Mr. C. Francalanza
MALLIA Mario	Section 16 of the Income Tax Act: its repercussions on the Maltese company	Mr. P. Darmanin Mr. J. Sant
MANGION Mark	Accounting treatment of fixed assets	Mr. F. Mifsud Bonnici
MERCIECA Tonio	A survey on Commercial Partnerships in Malta (1965-1982)	Dr. A. Leone Ganado
MUSCAT Jean Pierre	Tax consulting service and Inland Revenue	Mr. J. Sant Mr. E. Vella
MUSCAT SCERRI Juanita	Company failure predictors: An analysis of comparison with the Maltese Industry	Mr. C. Francalanza Mr. J. Vella Bondin
PACE Godwin	Establishing a management accounting system as a basis for cost and profit monitoring in a local commercial Bank	Mr. C. Soler
ROSSO Danny	Dissolution and winding up of a Commercial partnership; certain problems arising therefrom and possible solutions	Dr. J. Borg
STAFRACE Raymond	Accounting for the translation of foreign currency transactions and foreign currency financial statements	Mr. C. Francalanza
TRIGANZA Alfred	Investment Appraisal in Malta – an empirical study	Mr. J. Vella Bondin
VELLA Brian	An analysis of the Footwear Industry in Malta	Mr. K. Farrugia Mr. J. Kenely
VELLA Michael	A survey on the use of computer system within the Maltese Industry	Mr. C.T. Galea
ZAHRA Lawrence	Bank supervision and investigation	Mr. J. Vella Bondin
ZAMMIT Edward	Group Accounts in Malta	Mr. P. Baldacchino Professor D. Darmanin

#### **B.A.(Hons.) Business Management**

BARON Martin	Airline Growth and Organizational Development – A longitudinal study	Professor R. Sammut Mr. C. Fsadni
BONNICI Joseph	The setting up of a management information system at the M.S.C.L.	Mr. C.T. Galea Dr. A. Leone Ganado
CAMILLERI Peter	A study of the management of Agriculture cooperatives – the case of F.C.C.S.	Dr. E. Zammit

NAME OF STUDENT	TITLE OF DISSERTATION	SUPERVISORS
CARUANA Albert	The introduction of an export credit guarantee scheme for Malta – An appraisal	Dr. J. Grech Mr. L. Delia
CASSAR Mario	The relative importance of certain work attributes – a survey of the Maltese worker	Mr. S.P. Gauci
FARRUGIA Anthony	An evaluation of the contribution of Commercial Banks in the Economic Development of Malta since 1964	Mr. L. Delia
FELICE Harold	Workers Participation in Malta – relevance and adaptability of Maltese culture and social value	Dr. E. Zammit
IWANIK Krystof	Car Hire in Malta	Mr. S.P. Gauci Mr. C. Fsadni
STAFRACE Pierre	An analysis of the marketing strategies of the farmers wine cooperative	Dr. E. Zammit
TABONE Edmund	Development of Effective Bank Managers	Professor R. Sammut Mr. C.J. Falzon
VELLA Paul	Female Labour in Malta: attitudes to work among female employees of four textile firms	Dr. M. Vassallo Dr. E. Zammit
ZAHRA Dorothy	The applications of Capital Budgeting Techniques in conducting feasibility studies	Mr. J. Kenely Mr. J. Vella Bondin
<b>B.A.(Hons.) Public Administration</b>		
AZZOPARDI Joseph	Job opportunities in Gozo	Professor E.Scicluna Dr. L. Briguglio
BONETT Margaret	Import substitution in Malta 1970-1980	Mr. L. Delia
CALLEJA John	A comparative study of the Maltese and Italian labour movements	Professor E.Scicluna Dr. E. Zammit
CARUANA Joe	Workers' Participation in the Private and Parastatal Industries	Dr. E. Zammit Dr. M. Vassallo
CILIA Robert	Factors effecting the size of Trade Unions in Malta	Dr. E. Zammit
DEBONO Joseph	Evaluation of the workings of the Board of special commissioners established under the Income Tax Act 1948 through selected case law decided since its inception	Mr. J. Sant
DEBONO Marcelle	Electrical Energy Consumption in the Maltese Islands (1955-1983) – An Analytical assessment	Professor E. Scicluna
GATT John	The decline in Tourism – causes and effects	Mr. S.P. Gauci Mr. C. Fsadni
INGUANEZ Carmel	Labour Force Participation in Malta	Dr. L. Briguglio

NAME OF STUDENT	TITLE OF DISSERTATION	SUPERVISORS
LIBRERI Paul	The Algerian and Tunisian markets for Malta's exports	Mr. S.P. Gauci
MINTOFF Edith	Factors influencing Malta's administrative organisation	Mr. L. Grech Dr. A. Khan
MUSCAT Raymond	The competitiveness of Malta in certain export crops	Mr. F. Serracino Inglott
SANT John	Demand for Management Studies Graduates in Malta – with particular reference to Public Administration	Mr. L. Grech
VASSALLO Joseph	Malta's dependence on exports and imports	Dr. L. Briguglio Dr. J. Kaminarides

## UNIVERSITY GAZETTE

*All matter for publication in the next issue of the Gazette  
should be sent to the Registrar not later than the 31st August, 1985.*

At the Graduation Ceremony held on Friday, 12th April, 1985, Professor E. Scicluna, Head of the Department of Management Studies, delivered the following oration:

### THE RATIONAL MANAGEMENT OF THE MEDITERRANEAN ECO-SYSTEM

PROFESSOR E. SCICLUNA

The Mediterranean Sea is seriously threatened by the gradual build-up of various forms of pollution and has been designated by the United Nations Environmental Programme as an area of special concentration. International organizations are now working closely with scientific institutions in seventeen states bordering the sea to evaluate the damage already done and to find ways to harmonize industrial and other development policies with sound environmental practices.

Let us consider some of the threatening factors:

- Ninety percent of all the sewage from 120 Mediterranean coastal cities flows or is dumped into the water inadequately treated or not treated at all;
- In addition to municipal sewage, poisonous factory effluents (including heavy metals) and waste from oil refineries are discharged into the Mediterranean in ever-increasing quantities;
- Hundreds of tons of chemical pollutants are carried by winds over the Sea and fall with rain into the water;
- Oil tankers, passenger liners, freighters and naval vessels release hundreds of tons of waste, including oil, into the Sea every day;
- The rivers add their burden of pollution, originating largely in industrial areas, sometimes hundreds of kilometers from the coast;
- Off-shore drilling for oil and mineral exploration and exploitation are also potential sources of pollution;
- Viral hepatitis, dysentery, typhoid and poliomyelitis are endemic to the region and cholera breaks out periodically;
- The concentration of many toxic chemical compounds, especially mercury and other heavy metals, is also serious danger to man since these poisons are concentrated in molluscs, crustaceans and fish.

The above mentioned cases of chronic pollution are far more important than accidental pollution which tends to hit the headlines and attract more attention. When one considers that it takes the Mediterranean roughly eighty years to renew its waters, one is easily led to the often expressed view that Mediterranean may well be considered as dead or at least dying. Although there is no convincing scientific proof for this view, there can be no doubt that the Sea is sick and unless adequate measures are taken promptly to halt its deterioration, its illness may become incurable.

Pollution is in effect a direct function of the saturation of a given eco-system which cannot recycle by natural processes the excessive discharge of various forms of organic and inorganic substances and energy. While it is true that the Mediterranean has lived with pollution for many centuries, today it is less able to absorb the wastes of modern man. This is so for three reasons.

Firstly, our wastes contain many new synthetic chemicals that are more toxic and foreign to the marine environment. Secondly, the rapid growth of the mediterranean population is expected to continue through to the year 2000 and beyond. Today's population figure of 335 million is expected to double by 2030. Thirdly, is the unprecedented rate of development with the accompanying ramifications brought about by industry, tourism and urbanization. To understand the magnitude of the touristic phenomenon in the Mediterranean basin, one should remember that it represents about one third of all international tourism and is beyond doubt the world's single most important tourist area.

The pressures of urbanization and tourism are effecting not just the enclosed sea itself but its coastal areas. The result is inadequate infrastructures at the urban level with overloading of essential services and amenities such as housing, fresh water resources and sanitation. In the rural arid regions, the picture is equally depressing. Desertification is observed to be increasing at an alarming rate. The so-called man-made deserts are expanding at the rate of several hundred thousand hectares per year. Whichever way we see it man is making the Mediterranean an over-crowded system on the verge of ecological breakdown.

The awareness of the seriousness of the situation together with the particular enthusiasm of some international organizations did in fact lead to action. Ten years ago, UNEP, in co-operation with several specialized agencies, convened an intergovernmental meeting in Barcelona at which 16 Mediterranean coastal states approved an 'Action Plan' for the protection and continued development of the Mediterranean eco-region. The Plan comprises legal, scientific, integrated planning and other aspects designed (1) to help the Mediterranean governments to improve the quality of the information base on which national development policies are formulated; (2) to improve the ability of each government to identify various options and to make rational choices among alternative patterns of development, and (3) to allocate resources in the best way possible.

The legal framework was approved a year later. In February 1976, UNEP convened a Conference of Plenipotentiaries, hosted by Spain in Barcelona. The Conference was able to approve and open for immediate signatures a Convention and two Protocols dealing with the protection of the Mediterranean Sea against pollution. Briefly, the Convention commits the coastal states to 'take all appropriate measures ... to prevent, abate and combat pollution ... and to protect and enhance the marine environment' of the Mediterranean region. The Dumping Protocol prohibits any dumping at all of substances on a 'black list' and requires a special permit for the dumping of substances on a 'grey list'. The Protocol on Co-operation provides for the exchange of information, co-ordination of communications, and assistance in emergencies involving massive spills of oil or other substances. Two other Protocols followed: one dealing with dumping from land-based sources; another with the establishment of Mediterranean Specially Protected Areas.

Following agreement at the Barcelona meeting and at the invitation of the Government of Malta, a Regional Oil Combating Centre was established here in December, 1976. The primary objective of the Centre is to help coastal States take co-operative action and timely steps to prevent damage from massive and accidental pollution.

The scientific aspects of the plan were likewise approved in 1975 through a Co-ordinated Mediterranean Programme of monitoring and research consisting in its first phase of seven pilot projects. More than 200 scientific groups belonging to 83 Mediterranean institutions, including our own University, participated in MEDPOL. The second phase will continue the studies and monitoring of petroleum hydrocarbons and other pollutants in marine waters and marine organisms and research further their effects on the marine eco-systems.

In order to promote an ecological sound development of the Mediterranean Region the governments of the Mediterranean States agreed to a 'Priority Actions Programme' and a

'Blue Plan'. These programmes are aimed to evaluate, at different levels respectively, the various development possibilities. The result of these studies are expected to assist national decision-makers in selecting the more ecological rational paths in their socio-economic development.

By whatever standard it is measured the Mediterranean Action Plan represents a milestone for the countries of the Mediterranean eco-region. An extremely powerful new awareness led the Mediterranean to surmount their divisions and conflicts. The concern which drew them together was the survival of their common Sea.

In this respect, the Mediterranean Action Plan appears to offer the most suitable framework for expanding Mediterranean co-operation. It has the widest geographical coverage with seventeen out of the eighteen Coastal States represented. It deals with a far reaching set of issues. It possesses a solid institutional and financial basis: a Co-ordinating Unit in Athens, four specialized activity centres in Malta, Split, Sophia, Antipolis and Tunis; with regular meetings of the Contracting Parties and the technical committees. The Action Plan operates through Mediterranean Trust Fund based on the financial contribution of member states and assisted by the multilateral agencies including WHO, UNESCO, FAO, IOC, WMO, and others.

For these very valid reasons the Mediterranean Action Plan needs to be strengthened. Pressure should be brought to bear on the governments of the Mediterranean region in order to identify projects aimed at the protection of the Mediterranean Sea against pollution and at the rational development of their coastal areas. In spite of the successes in the scientific and legal fields, lack of investment in pollution control is delaying the attainment of the objective of a clean Mediterranean. Only concrete measures will produce the visible reversal in the state of ecological degradation of the Mediterranean Region. It is hoped that at its Ministerial Conference later this year the Action Plan is given a deservedly new stimulus by a new package of measures for the Mediterranean. The Mediterranean Action Plan may certainly appear ambitious but such an ambitious plan is necessary 'to save the Mediterranean'.