

## **Foreword**

This year the Institute continued to work hard on its research, applying for new projects and successfully winning some. During this academic year I was on sabbatical, during which I travelled extensively to conferences, invited lectures, research visits and at the same time kept managing the Institute administration, as well as other tasks involving University administration such as the newly set up Quality Assurance Committee which I chaired. During this year the staff worked on new project applications as the major projects came to an end the previous years. And all efforts paid off with three out of five proposals being funded under different programmes. The Institute is very pleased to be participating in a H2020 CIVITAS project called DESTINATIONS. This is the first time the Institute is collaborating with other island destinations in the Mediterranean to solve mobility problems for tourists and residents. In the other project CAMP-sUmp, funded by the INTERREG MED Programme, the Institute is collaborating with six other universities to draw up a plan for sustainable mobility on university campus. Both these projects fall within the scope and research expertise of the Institute and are envisaged to bring not only exposure of the University and the Institute but also new opportunities for research for our post-graduate students. Other major initiatives and events were organised in this year and this report highlights the outreach that the Institute has continued to do in order to raise awareness and publicize the results of research. It lists the contributions made in events, conferences and fora in which academic, government and industry partners were present. The award for research by the Vodafone Malta Foundation and Valletta Local Council is testimony to the credibility of the Institute to perform high impact research for the benefit of society.

I take the opportunity to thank our supporters, being the staff at the Institute and the University administration, industry partners, government and academics who collaborate with us from the various University departments and international institutions.

Professor Maria Attard
Director, Institute for Climate Change and Sustainable Development



## Introduction

The Institute for Climate Change and Sustainable Development was established in 2009. During 2015-2016 the Institute strengthened its research areas and continued with its research efforts to promote interdisciplinarity.

The Board of the Institute met regularly during this year where a number of key decision were taken with respect to the work of the Institute and the development of programmes, projects and events.

This report outlines the work and achievements of the Institute for Climate Change and Sustainable Development during the period October 2015 and September 2016.

#### THE BOARD OF THE INSTITUTE 2015-2016

Chairman Prof. Simone Borg

Vice-Chair and Director Prof. Maria Attard

Members:

Prof. Richard Muscat
Mr Godfrey Vella
Dr Philip Von Brockdorff
Dr John C. Betts

**Prof. Alex Torpiano** 

**Prof. Sandro Lanfranco** 

**Prof. Adrian Muscat** 

Prof. John A. Schembri

Ms Thérèse Bajada

**Ms Margaret Camilleri Fenech** 

**Dr Anton Bartolo** 

## Aims of the Institute

- (a) to perform and promote interdisciplinary research on issues related to sustainable development, social sustainability, and climate change including mitigation and adaptation strategies;
- (b) to provide consultancy, advice and assistance on sustainable development and climate change including mitigation and adaptation strategies;
- (c) to provide continuous education, undergraduate, and postgraduate courses within the scope of the Institute subject to the Statutes and Regulations of the University;
- (d) to act as host institution for scholars, professors and chairs of international repute, as well as programmes, networks and fora, that aim to enhance the profile of the Institute within the regional and European research area, in areas related to sustainable development and climate change including mitigation and adaptation strategies;
- (e) to use telemetry, IT tools, intelligent systems, and modelling for monitoring, research, decision support and strategic planning;
- (f) to engage in knowledge transfer and awareness raising initiatives on sustainable development and climate change with companies, organisations and other institutions outside the University to promote best-practice (e.g. to promote the uptake of cleaner technologies; to mitigate and adapt to impacts of climate change on business operations and markets);
- (g) to network and liaise with similar or complementary, university institutions and centres for sustainable development or climate change; and
- (h) to disseminate acquired knowledge through online media, publications, seminars, conferences and teaching programmes.

# The University of Malta Institute for Climate Change and Sustainable Development

#### The Administrative Office

During 2015-2016 the Institute was located in Regional Business Centre Triq Achille Ferris Msida. This office housed the administrative as well as the academic staff, whilst also offering space for interns, students and project work which the Institute maintained and ran throughout the year.

#### The Institute's Human Resources

During this academic year the Institute also engaged a number of Research Support Officers to work on numerous projects funded through local and international funds.

Ms Deborah Mifsud and Mr Carlos Canas Sanz continued to work on a number of projects and their respective post-graduate studies. Ms Mifsud successfully completed her transfer from MPhil to PhD during this year and was appointed post-graduate judge within the Transport Geography Research Group (Royal Geographic Society) for the price of the best undergraduate dissertation at the Annual Conference. She was also appointed casual lecturer at the institute and the Department of Geography at the University of Malta. Mr Carlos Canas Sanz registered for an MPhil. at the Institute.

**Mr Michael Camilleri** joined the Institute as Research Support Officer II to work on the Vodafone Malta Foundation project for a period of 12 months.

**Mr Dylan Seychell** and **Mr Aldrin Seychell** joined the Institute as Part-time Research Support Officer II and Research Support Officer I respectively to work on the VaTIS project.

**Ms Thérèse Bajada**, Assistant Lecturer and **Ms Margaret Camilleri Fenech**, Assistant Lecturer (TR4) have continued to pursue their PhD studies, as well as supporting the growth in the Institute's teaching and administration.

Mr Raphael Mizzi has continued to work on the Green Travel.

**Ms Romina Zammit** was promoted to Administrative Assistant and has continued to manage and support the Institute, its staff and activities.

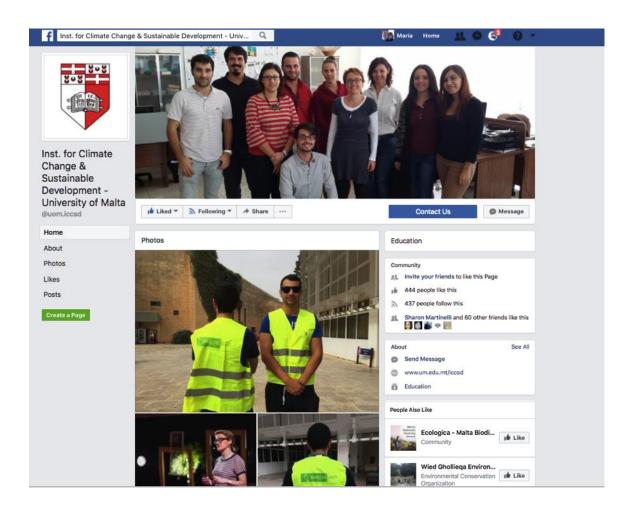
# **Community Outreach**

#### The Institute on the WWW

The Institute website has continued to act as a medium for communication with the University community and the general public. The Institute's website contains reference to almost all the work that the Institute engaged in since its opening in 2009. The structure of the website continues to change and adapt according to the themes of research at the Institute. Further content is uploaded regularly ensuring all the activities are documented online and accessibility to the general public.

In 2014, the Institute also launched its facebook page. A very good response was received from the public, and use of the Institute facebook page remained active throughout with some evident peaks during particular events and uploads.

## https://www.facebook.com/uom.iccsd/



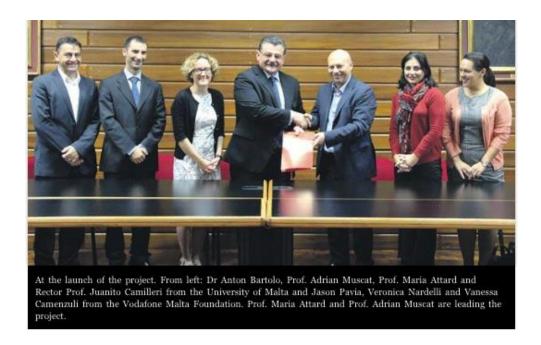


# The Malta Independent

## Shared demand responsive transport

Professor Maria Attard and Professor Adrian Muscat awarded funds by the Vodafone Malta Foundation through the Connecting for Good Programme to develop the technology behind a shared demand responsive transport system for the University.

http://www.independent.com.mt/articles/2015-12-03/business-news/Shared-demand-responsive-transport-project-6736149778#.VmSZ7ascIDQ.gmail 03/12/2015



## The Sunday Times of Malta

#### The road ahead

Professor Maria Attard and Professor Adrian Muscat awarded funds by the Vodafone Malta Foundation through the Connecting for Good Programme to develop the technology behind a shared demand responsive transport system for the University.

https://www.timesofmalta.com/articles/view/20151213/technology/The-road-ahead.595648 13/12/2015

#### The Commercial Courier – Publication of the Chamber of Commerce

December 2015 – January 2016 Issue 63

#### Malta's traffic situation reaches fever pitch

http://www.um.edu.mt/\_\_data/assets/pdf\_file/0007/268117/CommercialCourierArticle.pdf



# **Money Magazine**

December 2015 - Issue 34

**The road to technology – How do we come unstuck from this traffic jam?** Interview with Prof. Maria Attard

http://www.um.edu.mt/\_\_data/assets/pdf\_file/0014/271013/MoneymagazineDec15.pdf

## Maltarti - TVM programme

Programme of the Malta Arts Council on paper and digital Maps. Interview with Prof. Maria Attard.

https://www.youtube.com/watch?v=et9\_i5gC5PY 04/04/2016

#### **Times of Malta**

# **Education is key to improving traffic**

A feature on the Chamber of Commerce seminar to which Prof. Maria Attard was a contributor. 09/06/2016

## MaltaToday

# University students told to share travel information on smartphone app

New travel app can help researchers reduce traffic congestion to and from University of Malta by learning more about how students and staff commute. Article on the app VJAĠĠ developed by the Michael Camilleri and funded by the Vodafone Malta Foundation.

http://www.maltatoday.com.mt/business/technology/66521/university\_students\_told\_to\_share\_travel\_i nformation\_on\_smartphone\_app#.WU1im1N97OS 15/06/2016

## The Malta Business Weekly

## **Sustainable Mobility Seminar at MCCEI**

Article by Vanya Walker-Leigh reporting on the seminar held at the Malta Chamber of Commerce.

http://www.um.edu.mt/\_\_data/assets/image/0008/284345/MBW2016sustainablemobility.jpg 23/06/2016

# The Architect – Magazine of the Chamber of Architects (Kamra tal-Periti) Sustainable mobility and the use of public space in historic village cores: Lija as a case study

This is the first time that a study by the University of Malta's Institute for Climate Change and Sustainable Development is reported on The Architect. Documents the Lija project which was a collaboration between the Institute and Architectural Project (AP).

http://www.um.edu.mt/\_\_data/assets/pdf\_file/0005/287510/Lijaproject.pdf 23/06/16



Participation in conferences, invited lectures and other events

# 1<sup>st</sup> - 4<sup>th</sup> September 2015 Royal Geographic Society Annual International Conference, University of Exeter, UK.

**Ms Deborah Mifsud** delivered a presentation at the RGS Annual Conference entitled A Holistic Overview of Transport Vulnerabilities for the Elderly: The Maltese Case Study. This is part of her PhD studies and she also participated in the post-graduate forum within the Society.



# 9<sup>th</sup> - 10<sup>th</sup> October 2015 First Transport Manager and Practitioner Forum, Intercontinental Hotel, Malta

**Ms Thérèse Bajada** delivered a presentation entitled Infrastructure and Geographic Information Systems at the Forum.

22<sup>nd</sup> – 23<sup>rd</sup> October 2015 Cultural Mapping Valletta 2018 Capital of Culture, Valletta, Malta Prof. Maria Attard presented the work carried out with Mr Jeremy Azzopardi on the Cultural Mapping Project.



# 21<sup>st</sup> September 2015 - 9<sup>th</sup> October 2015 TEA TU1209 COST Action STSM, Institute for Transport Studies, University of Leeds.

## **Supervisor - Prof Karen Lucas**

During the three-week stay at the Institute for Transport Studies in Leeds **Deborah Mifsud** attended different research seminar events and talks with other researchers and PhD candidates. An objective of the STSM was a review of literature on old age and equity. A report was subsequently published and available at http://www.teacost.eu/index.php/publications/tea-reports

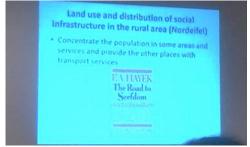


Mifsud, D. and Lucas, K. (2015) *The Complexity of old age: What are the transport equity issues?* STSM Report, TU 1209 TEA COST Action.



# 10<sup>th</sup> - 11<sup>th</sup> November 2015 TEA 1209 COST Action Workshop on Equity Tools and new Technologies, Aachen, Germany.

**Deborah Mifsud** was part of Pane 4 which focused on How to include equity in modelling and What new requirements are needed in data. Panel 4 evaluated a case study on Land Use and Distribution of social infrastructure in the rural area (Nordeifel).



# 24<sup>th</sup> - 26<sup>th</sup> November 2015 Towards Collaborative Practice – European Conference on Youth Work, Social Innovation and Enterprise, Malmo, Sweden.

**Mr Carlos Canas** was invited to attend this conference. He delivered a presentation about a socio-environmental project in Malta. The conference and workshops were supported by Erasmus+ Programme.



Linked to this event, **Mr Canas Sanz** attended a Transnational Cooperation Activity (TCA) dissemination evening organised by EUPA (European Union Programmes Agency) on the 23<sup>rd</sup> of June, 2016 in Malta for the sharing of good practices amongst TCA participants.

11<sup>th</sup> - 13<sup>th</sup> January 2016 Transportation Research Board Annual Meeting, Washington DC Prof. Maria Attard attended the Annual Meeting in Washington DC where she had the chance to attended a number of session dealing with current research work on Demand Responsive Transport and the shared economy.







# 29th February - 11th March 2016 Short Term Scientific Mission COST Action IC1203 ENERGIC



Mr Carlos Canas Sanz participated in a Short Term Scientific Mission (STSM) entitled *Collating, managing and uploading documents to the ENERGIC VGI Repository* at the University of Tallinn, Estonia. The STSM was supported by COST Action IC1203 ENERGIC and was the result of an on-going effort within ENERGIC to build an open and flexible repository to facilitate the use and exploitation of Volunteer Geographic Information (VGI) by allowing users to upload relevant data and information related to VGI, which can be ultimately accessed by anyone who wants to use it or research in the field of VGI.

16<sup>th</sup> - 18<sup>th</sup> March 2016 International Conference SBE16 Europe and the Mediterranean Towards a Sustainable Built Environment, Valletta, Malta.

**Prof. Maria Attard** delivered a presentation entitled *Sustainable mobility, livability and public space in historic village cores – a case study of Lija, Malta*. The work was carried out in collaboration with Perit Alberto Miceli Farrugia and Perit Jacques Borg Barthet.



29<sup>th</sup> March – 1<sup>st</sup> April 2016 Association of American Geographers (AAG) Annual Meeting, San Francisco, USA

**Prof. Maria Attard** presented the work on *Malta's Ageing Society:* Determinants affecting elderly travel behaviour authored with **Ms Deborah Mifsud** (first author) and Stephen G. Ison.



# 11<sup>th</sup> - 12<sup>th</sup> April 2016 TEA 1209 COST Action Meeting, Lisbon, Portugal

**Ms Deborah Mifsud** was the rapporteur for the Management Committee and for the Round Table with invited Stakeholders from transport and other public utilities sectors in Europe. Ms Mifsud participated also in Group 3 which focused on a "Roadmap (e.g. legislation, regulation impact assessment, big data, travel surveys etc.) to move forward on transport equity".

17<sup>th</sup> - 18<sup>th</sup> May 2016 NECTAR Joint Cluster 2 and Cluster 3 International Conference "The role of planning towards sustainable urban mobility", Brno, Czech Republic

**Prof. Maria Attard** delivered a presentation entitled *Re-designing urban public spaces to promote sustainable mobility in historic urban centres: the case of Lija, Malta*. The work was carried out in collaboration with Perit Alberto Miceli Farrugia and Perit Jacques Borg Barthet.

11<sup>th</sup> - 15<sup>th</sup> July 2016 Training School VGI and Policy: Managing, Integrating and Targeting Crowdsourced Information, Vespucci Institute, Fiesole, Florence, Italy.

**Mr Carlos Canas** was awarded a scholarship to attend this training school. The Vespucci Summer Institute was dedicated to the interaction of volunteered geographic information (VGI) and policy, and to the manifold ways of employing VGI in decision-making.



10<sup>th</sup> - 15<sup>th</sup> July 2016 World Conference on Transport Research (WCTR2016), Tongji University, Shanghai, China

**Prof. Maria Attard** and **Ms Thérèse Bajada** attended the WCTR2016 and presented research being carried out at the Institute.









The research as presented in a number of sessions in the World Conference and included:

- The relationship between public transport and tourism in the small island state of Malta by **M. Attard**
- Measuring congestion impacts on the islands of Malta by **M. Attard**, J.N. Ibanez, P. Von Brockdorff, F. Bezzina, P. Christidis
- The attitudes of tourists towards a bus service: implications for policy from a Maltese case study by **T. Bajada**, H. Titheridge

16<sup>th</sup> July 2016 International Symposium New Approaches to Transport and Urban Sustainability in China, Suzhou, China

**Prof. Maria Attard** was invited by the Xi'an Jiaotong-Liverpool University to deliver a presentation entitled *The potential of Volunteered Geographic Information on future transport systems.* The conference also included technical visits to tram builders and operators in Suzhou.



**Prof. Maria Attard** was among the few European speakers which included Prof. Peter Jones (UCL), Dr Robin Hickman (UCL), Prof. Moshe Givoni (Tel Aviv). Other participants and presenters included academics from both China and Australia.



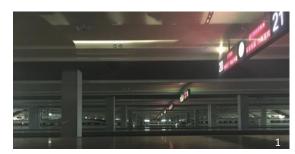




























- 1. High Speed Train Station in Shanghai
- 2. Xi'an Jiaotong-Liverpool University Conference Centre and Hotel
- 3. Elevated pedestrian infrastructure over highways
- 4. Elevated highway infrastructure
- 5. More large road infrastructures in Suzhou
- 6. New tram infrastructure in Suzhou
- 7. Tram simulator for driver training (SND Tram)
- 8. Prof. Attard at the simulator
- 9. Tram approaching station in Suzhou

8<sup>th</sup> June 2016 Towards a Sustainable Mobility in Malta Part 1 – Setting the Scene, Malta Chamber of Commerce, Enterprise and Industry, Valletta, Malta.

**Prof. Maria Attard** was an invited speaker and discussant at this seminar organised by the Embassy of the Federal Republic of Germany, the German Maltese Business Council and the Malta Chamber of Commerce, Enterprise and Industry. The title of her presentation was *The future sustainability of transport in Malta*. **Ms Thérèse Bajada** and **Ms Deborah Mifsud** both attended the event.



30<sup>th</sup> August – 3<sup>rd</sup> September 2016 Thredbo14 Conference on Competition and Ownership in Land Passenger Transport, Santiago de Chile, Chile

**Ms** Thérèse Bajada delivered a presentation entitled *To Contract or to Operate Publicly?*Observations from the bus service reform transition process in Malta. This work is part of her PhD studies at UCL, in collaboration with Dr Helena Titheridge.



1<sup>st</sup> - 2<sup>th</sup> September 2016 Royal Geographic Society Annual International Conference, Royal Geographical Society, London, UK.

**Prof. Maria Attard** presented the work carried out in Lija with a presentation entitled *The potential of transport* and public spaces to deliver sustainable urban development: the case of Lija, a historical village in Malta.



# The Institute's Study Programmes

# The Postgraduate Certificate in Geographic Information Systems

The Postgraduate Certificate in Geographic Information Systems covers the principles of the Geographic Information Science, such as spatial databases, programming, remote sensing and digital cartography and the technology supporting Geographic Information Systems such as principles, management and applications. It is a part-time (evening) course over two semesters.



#### YEAR ONE

ISD5001 Principles of Geographic Information Systems 5 ECTS

ISD5002 GIS and Databases 5 ECTS

ISD5003 Applying GIS (Lab Practicals) 5 ECTS

ISD5004 Geographic Information, Remote Sensing and Digital Cartography 5 ECTS

ISD5005 Managing Geographic Information Systems 5 ECTS

ISD5006 Programming in GIS 5 ECTS

# The Master of Science by Research (Sustainable Development)

The Master of Science (Sustainable Development) is a research programme enabling researchers to focus on a variety of topics to be studied in depth through full-time or part-time study. The study programme is over three semesters or equivalent in part-time.

Research conducted by MSc students can be found at http://www.um.edu.mt/iccsd/study\_programmes\_courses/research\_at\_isd

#### YEAR ONE

ISD5100 Dissertation 80ECTS

ISD5101 Research Methods 5ECTS

ISD5102 Principles of Sustainability 5ECTS

# MPhil. /Ph.D. Programme

The Institute also offers a limited number of MPhil./Ph.D. positions in a number of interdisciplinary fields. Applicants are required to contact the Institute if interested.

# **New Research Activity**

The Institute has continued to work on the projects awarded in the previous year. It has also succeeded to submit and participate in project proposals, both locally and abroad. Table 1 shows the projects which were developed by the Institute and its partners and the outcome of the funding applications.

Funding	Title of Project	Project Partners	Outcome and Value
Programme			
UOM R&I	Assessing the impact of transport measures on sustainable mobility	Prof. Maria Attard, ICCSD	EUR 1,500
HORIZON2020	CIVITAS DESTINATIONS	Prof. Maria Attard, ICCSD and 27 other partners from six European islands destinations	EUR 300,000
INTERREG MED	CAMP sUmp	Prof. Maria Attard, ICCSD and 6 other partners from seven university campus cities in the MED region	EUR 55,600
INTERREG MED	i-Perform	Prof. Maria Attard, ICCSD and other partner cities and Universities from the MED region	NOT AWARDED
Malta Resources	Review of CLARE – Malta's	Dr Philip Von Brockdorff; Dr Carl Camilleri, Department of	EUR 6,308
Authority	sectoral emissions models	Economics, FEMA; Prof. Maria Attard, ICCSD	
Vodafone Malta	Shared Demand Responsive Prof. Maria Attard, ICCSD; Prof. Adrian Muscat, Faculty of ICT		EUR 27,000
Foundation	Transport Project		
Valletta Local	VATIS (Valletta Travel	Prof. Maria Attard, ICCSD; Prof. Alexiei Dingli, Faculty of ICT	EUR 31,553
Council	Information Service)		
Malta Resources	Development of the LULUCF Map	Institute for Climate Change and Sustainable Development	NOT AWARDED
Authority (Climate	for Malta to support the		
Change Group)	reporting obligations under the		
	UNFCCC Convention		
COST	Citizen Science to promote	Coordinated by Museum für Naturkunde Berlin (DE). Partners	AWARDED
	creativity, scientific literacy, and	COST Countries	
	innovation throughout Europe		

# **On-Going Projects**

**Project Events** 

13<sup>th</sup> – 15<sup>th</sup> September 2016 H2020 CIVITAS DESTINATIONS Project Kick Off Meeting, Madeira

The University of Malta, together with Transport Malta, the Valletta Local Council and the Ministry for Tourism is participating in the CIVITAS DESTINATIONS Project. This project aims to implement sustainable mobility measures and actions with the view to offering intelligent sustainable transport solutions for tourists and residents. The project brings together Funchal (Portugal), Las Palmas (Spain), Elba (Italy), Rhetymno (Greece), Limassol (Cyprus)



and Malta who together will work towards finding solutions to common problems.

In Malta, the project focuses on the Southern Harbour and Northern Harbour districts termed as the Valletta Region.









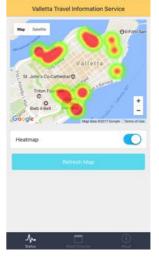




# **European Mobility Week Sustainable Urban Mobility Plan (SUMP) Awards -** The Valletta Travel Information Service (VaTIS) Project

Following the European Mobility Week Award in 2015 the Valletta Local Council has sub-contracted the Institute for Climate Change and Sustainable Development to develop VaTIS (Valletta Travel Information Service) as an output of these awards. **Prof. Maria Attard** lead a team of developers and in collaboration with Prof. Alexiei Dingli (Mayor of Valletta) developed the mobile App which is envisaged to be launched later in 2017.





# **INTERREG MED CAMP-sUmp**



CAMP-sUmp aims to improve sustainable urban mobility planning instruments with innovative mobility strategies for University students in regions of the European shores of the Mediterranean, and their integration with the urban areas. Project's main results are the definition of a common strategy in Mediterranean northern sea basin regions that integrates student flow in urban mobility planning with support of ICT instruments and reduction of negative externalities on urban areas and Campuses.

Seven campuses are involved in the project including the University of Malta, University of Split, National Technical University of Athens, the University of Bologna, University of Catanzaro and the Fondazione Magna Grecia (Lead Partner), and University of Valencia and University of Cyprus. The project is set to kick off later in 2016.



# Malta Resources Authority, Climate Change Group - Review of the current emissions model (CLARE) used for emission projections and reporting obligations

The Institute for Climate Change and Sustainable Development was requested to develop a proposal to carry out a review of the emissions model — Climate Action Results Evaluator (CLARE) - which is currently under the responsibility of the Malta Resources Authority (MRA) and is used to project emissions for the reporting obligations on Policies and Measures (PAMs) in accordance with Article 3(2) of Decision 280/2004/EC concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol and the related implementing provisions of Decision 2005/166/EC.

This work was coordinated by **Prof. Maria Attard** in collaboration with Dr Philip Von Brockdorff and Dr Carl Camilleri, both from the Department of Economics, Faculty of Economics, Management and Accountancy within the University of Malta.



# Travelling Smart – The Green Travel Plan Committee at the University of Malta



Prof. Maria Attard continues to chair the Green Travel Plan (GTP) Committee which aims to implement the University Green Travel Plan approved in 2012. Mr Raphael Mizzi, the GTP Coordinator administrates the GTP work as well as act as secretary to the GTP Committee.

The GTP Committee for 2015 – 2017 was made up of:

Prof. Maria Attard (Chair)

Ms Thérèse Bajada (Travel Plan Expert, ICCSD)

Mr Rebecca Micallef (2015) (President, KSU)

Mr Joseph Camilleri (Precincts Officer)

Ms Amanda Ciantar (Office of Human Resources)

Ms Nathalie Cauchi (UHM)

Mr Raphael Mizzi (Secretary)

Ms Maronia Schembri (Precincts Office)

Prof. Luciano Mulé Stagno (UMASA)

Perit Christopher Spiteri (Director Estate & Works)

During 2015/2016 a number of initiatives were undertaken by the GTP Committee and the GTP Coordinator in order to improve travel to the University.

#### The Website

In order to maintain communication lines open with the University community the GTP website is updated on a regular basis with useful information and links about green travel to and from University.

Further useful links and information is made available through this website and publicised from time to time internally within the University community.



http://www.um.edu.mt/greentravel

#### **Facebook**

Since 2015 the ICCSD created a Facebook page where all the news and events related to the Institute are posted on this page. The GTP coordinator uploads several weekly news to create awareness about green travel with UoM members and other visitors.

# **Cycling**

Paragon Europe Bike2Work Campaign

On the 26<sup>th</sup> May 2016 Ms Lorraine Vassallo from Paragon EU and the GTP Co-ordinator met to discuss potential collaboration for the Bike2Work event on the 9th June 2016.



# **Car-pooling**

KSU Car-Pooling Application Discussions

On the 16<sup>th</sup> October 2015 the GTP Coordinator and KSU President discussed about incentivising students who make use of the 'KSU Car Pooling Application'.



Car-pooling discussions with KSU and BumALift



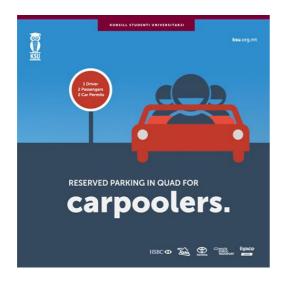
On the 28<sup>th</sup> of January 2016 the GTP Coordinator and KSU President discussed car-pooling options for UoM students with Mr Shawn Grech, cofounder of Bum A Lift.



Kunsill Studenti Universitarji (KSU) in collaboration with the University of Malta's Green Travel Committee and Precincts Office is pleased to announce the launch of a new initiative to promote

car-pooling at the University of Malta. KSU is aware that given the substantial growth in the number of students that attend University every year, there exists an on-going parking problem on campus.

Car Park 4 Car-Pooling pilot project





On the 2<sup>nd</sup> February 2016 Car Park 4 (near quad) started to be reserved for car poolers. To gain access to this parking, a car must have a driver, at least 2 passengers and the security guard must be shown 2 parking permits (including the one of the car itself). This pilot project lasted for 2 months from 7am - 1pm. A study was conducted and the initiative was extended.

## Other activities

James Madison University Students



During the month of June 2016 the GTP coordinator assisted students from James Madison University (JMU) by delivering related presentations to the students, to explore the feasibility and sustainability of an SDRT system. Students developed a questionnaire which tackled the technical, environmental, economic and social point of view of an SDRT system.

A final report was presented to ICCSD for future work.

#### **Events**

# GTP during Freshers' Week 2015

During Freshers' Week 2015 students and other visitors had the opportunity to gather information about Green Travel Initiatives. Information about car-pooling and other sustainable transport was disseminated to visitors and the GTP Coordinator had also the opportunity to meet the President of Malta and explain to her the GTP efforts carried so far.





# **Participation in International Scientific Committees**

Academic members of staff of the Institute have participated and contributed to a number of scientific committees and conferences during the period under review. Below is a list of contributions.

- **Prof. Maria Attard** continues to co-lead the NECTAR Research Cluster 2 on Policy and Environment. NECTAR is the European Transport Research Association
- **Prof. Maria Attard** continues to co-lead the Special Interest Group G3 on Urban Transport Planning and Policy in World Conference on Transport Research (WCTR).
- **Prof. Maria Attard** is co-chair of the Climate Change Committee of the Association for European Transport (AET). She will be automatically designated as part of the annual conference scientific committee.
- **Prof. Maria Attard** was a member of the Scientific Committee for the 14th World Conference on Transport Research organised by the World Conference on Transport Research Society (WCTRS), Tongji University, Shanghai (China), 10th 15th July 2016. **Ms Thérèse Bajada** and **Ms Deborah Mifsud** both acted as reviewers to the conference papers.
- **Prof. Maria Attard** was a member of the Scientific Committee for the NECTAR 2016 Joint Cluster Workshop "The role of planning for sustainable urban mobility" organised by the Association of European Communications and Transport Activities Research (NECTAR), Transport Research Centre Brno (Czech Republic), 17th May 18th May 2016.









During the period under review **Prof. Maria Attard, Ms Thérèse Bajada** and **Ms Deborah Mifsud** acted as paper reviewers to a number of academic journals including Case Studies in Transport Policy (Elsevier), Journal of Transport Geography (Elsevier), Transportation and Research Part A: Policy and Practice (Elsevier), Transport Reviews (Taylor and Francis), Transport Planning and Technology (Taylor and Francis), Travel Behaviour and Society (Elsevier), Journal of Transport Geography (Elsevier), ICE (Institute of Civil Engineers) — Transport (ICE) and Transportation and Research Part A: Policy and Practice (Elsevier).

**Prof. Maria Attard** joined the editorial teams of the *Journal for Transportation Business and Management* published by **Elsevier**, the *Journal of Digital Landscape Architecture* published by **Wichmann** and *Xjenza Online* - The Journal of the Malta Chamber of Scientists

## Other staff news

**Prof. Maria Attard** and **Ms Thérèse Bajada** collaborated to review and submit feedback on the National Transport Strategy and Transport Masterplan published by Transport Malta in August 2017. The feedback was subsequently published online and comments were taken on board by Transport Malta in the final document.

**Ms Deborah Mifsud** and **Ms Thérèse Bajada** have continued to support the MATSEC Boards for Geography and Environmental Studies.

Ms Margaret Camilleri Fenech completed and submitted a paper to the Journal of Cleaner Production. The paper entitled *Beyond waste. An examination of municipal waste management practices in the Maltese Islands using comparative material flow accounting and carbon footprint assessment to analyse current and future planned scenarios was presented as a poster at the ISIE 2015 conference "Taking stock of industrial ecology" at the University of Surrey. In November 2015, an oral presentation was held during the workshop "Catalysing sustainable urban transformations" at the Global Cleaner Production and Consumption Conference held in Sitges, Barcelona between the 1st and 4th November.* 





Between the 9th and 10th June 2016 **Ms Margaret Camilleri Fenech** attended a course at the Technical University of Vienna (TU Vienna). The focus was on the use of STAN 2.5, freeware used for the development of Material Flow Analysis (MFAs). The workshop presented the various uses of STAN and allowed participants to extend their skills for the use of the software by providing practical exercises.

**Ms Margaret Camilleri Fenech** was part of the evaluation committee for the 2016 Sustainable Industry Award supported by the Ministry for the Economy, Investment and Small Businesses (MEIB). The Cleaner Technology Centre was once again asked to assist in the organisation of this award.

**Ms Margaret Camilleri Fenech** also supported the organization of a seminar entitled Sustainability in Industry, organised by the Cleaner Technology Centre at the Palace Hotel,

Sliema. The seminar hosted a number of speakers both from the industry, the Chamber of Commerce and the newly formed Environment and Resources Authority (ERA). The organising committee included also Mr Anton Pizzuto and Dr Paul Refalo.



During her sabbatical year **Prof. Maria Attard** was invited to deliver lectures and public seminars in a number of universities. These included:

University of California at Davis, California, USA Invited Public Seminar at the Institute of Transportation Studies (ITS) entitled *The potential of Volunteered Geographic Information (VGI) on future transport*. 8 April 2016.

Prof. Maria Attard spent two weeks in San Francisco and the University of California Davis as part of her sabbatical year carrying out research and delivering presentations.





**University College London, London, UK** Invited Public Seminar at The Bartlett School of Planning entitled *Voluntary Geographic* 

Information and Transport Systems. October 2015.

**University of Insubria, Varese, Italy** Invited Guest lecturer on *transport geography and economics* at the Department of Economics, October 2015.



The Director of the Institute **Prof. Maria Attard** was also appointed as member of a number of Boards and Committees during this year. These included

- Member of the newly set up Environment and Resources Authority (ERA) Board, Malta
- External (remote) Evaluator for the **COST Association** (2016 Call for Proposals), Brussels, Belgium
- Evaluator for the **European Research Council (ERC)** Work Programme 2016, Brussels, Belgium
- Member of the International Panel of Experts for the research programme NWO SURF Research Programme, coordinated by the **Netherlands Organisation for Scientific Research (NWO)** (2015), Utrect, The Netherlands.
- Chair of the Interim Quality Assurance Committee, **University of Malta** tasked to set up the institutional structures for Quality Assurance at the University.



## **Other Initiatives**

Participation in COST



**Prof. Maria Attard** attended the **ENERGIC COST Action Meeting in Lisbon, Portugal 19<sup>th</sup> - 20<sup>th</sup> November 2015** hosted by the Laboratorio Nacional de Engenharia Civil (LNEC). The Management Committee Meeting was also followed by the workshop on Data Integration and Semantics. Prof. Maria Attard organized and chaired a Special Session on Urban Applications.



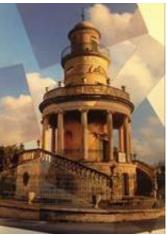
Ms Deborah Mifsud and Ms Thérèse Bajada attended the TEA COST Action 1209 Meeting in Lisbon, Portugal 11-12<sup>th</sup> April 2016. In this meeting Ms Mifsud was the rapporteur for the Management Committee and for the Round Table with invited Stakeholders from transport and other public utilities sectors in Europe. She was also part of Group 3 which focused on a "Roadmap (e.g. legislation, regulation impact assessment, big data, travel surveys etc.) to move forward".

**Prof. Maria Attard** was part of a consortium that got funding for a **new COST Action on Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe**, led by the Natural History Museum in Berlin (CS-EU COST Action CA15212). She is part of the Management Committee and the STSM Coordinator within the COST Action. **Mr Carlos Canas Sanz** is a substitute for Prof. Attard in this Action.

**Prof. Maria Attard** conducted a **Short Term Scientific Mission at University College London (UCL) as part of the ENERGIC COST Action**. During the month of February Prof. Attard worked with Prof. Muki Haklay (UCL) and Prof. Cristina Capineri (Univ. of Siena) on a paper on Voluntary Geographic Information and Transport Systems. This collaboration resulted in a published paper later in the year in the journal *Urban Planning*.

10<sup>th</sup> December 2015 Presentation of the Lija Strategy to Lija residents Workshop organised by the Lija Local Council, Primary School, Lija. Residents were invited to attend a presentation held by Prof. Maria Attard, Perit Jacques Borg Barthet and Perit Alberto Miceli Farrugia on the final strategy on Lija, as part of the outreach project which the Institute collaborated with Architecture Project (AP). The meeting was very successful with residents requesting the Mayor to petition for change.





**22**<sup>nd</sup> **January 2016 8**<sup>th</sup> **Environment Awards for Industry 2015** organised by the Cleaner Technology Centre was held at the Grand Hotel Excelsior in Floriana. The adjudicating committee was chaired by **Prof. Maria Attard** and the awards were organised and coordinated by **Mr Anton Pizzuto** with the support of **Ms Margaret Camilleri Fenech**.







# 24<sup>th</sup> February 2016 Partnership for Research and Innovation in the Mediterranean Area (PRIMA)

Ms Thérèse Bajada and Ms Margaret Camilleri Fenech attended this meeting which served as a launch of the public consultation for a proposal to participate in a joint research and innovation programme focused on the development and application of innovative solutions for food systems and water resources in the Mediterranean region. This meeting was organised by the Malta Council for Science and Technology (MCST).

# 16<sup>th</sup> - 18<sup>th</sup> March 2016 SBE16: Europe and the Mediterranean towards a Sustainable Built Development

Mr Carlos Canas, Ms Deborah Mifsud, Ms Thérèse Bajada and Ms Margaret Camilleri Fenech attended this international conference, organised by Sustainable Built Environment (SBE) Malta in Valletta. Prof. Maria Attard presented the Lija work (conducted in collaboration with Perit Alberto Miceli Farrugia and Perit Jacques Borg Barthet).

# April 2016 Earth Day: Giovanni Curmi Higher Secondary School, Naxxar

Mr Carlos Canas participated with Mr Raphael Mizzi and Ms Therese Bajada to the Earth Day celebrations.

Students had the opportunity to discover the type of research carried out within our institute.



# 30th - 31st May 2016 Conference and site visit on Sustainable Food and Biowaste Management, Mediterranean Conference Centre and Maghtab Environmental Complex

Ms Margaret Camilleri attended the conference and site visit at the new Malta North Environmental Facility. Amongst other things, the whole day conference focused on food waste and the introduction of biowaste collection in various localities. The conference was organised by Wasteserv Malta Ltd.





# The Institute Visiting Lecturer

This year the Institute hosted Dr Robin Hickman, Reader in Transport Planning and the City at the Bartlett School of Planning, University College London (UK). Dr Hickman delivered well attended lectures and a successful public lecture at the University of Malta.



Dr Robin Hickman, Reader in Transport and City Planning, Bartlett School of Planning, University College London (UCL)

https://iris.ucl.ac.uk/iris/browse/profile?upi=RHICK55

Robin is a Reader in Transport Planning and the City at the Bartlett School of Planning (BSP), University College London and Director of the MSc in Transport and City Planning. He has been a Visiting Research Associate at the Transport Studies Unit (TSU), University of Oxford since 2011. He worked in consultancy as an Associate Director at Halcrow, leading on transport research between 2004 and 2011, on masterplanning and transport research at Llewelyn Davies between 1999 and 2004, and local transport planning at Surrey County Council between 1995 and 1999. He has research interests in transport and climate change, urban structure and travel, integrated transport and urban planning strategies, the affective dimensions of travel, discourses in travel, multi-criteria appraisal, and sustainable transport strategies in the UK, Europe and Asia. He has co-authored books and best practice guides including the 2015 Handbook on Transport and Development, with Moshe Givoni, David Bonilla, and David Banister (Edward Elgar) and the 2014 Transport, Climate Change and the City, with David Banister (Routledge). He has also developed over 60 journal articles, book chapters, published reports and working papers. He gained his PhD in transport planning studies at the Bartlett School of Planning in 2007 and MA in Town and Country Planning at Manchester University in 1994. He also gave written and oral evidence to the UK House of Commons Environmental Audit Committee on Transport and Climate Change in 2006.

Dr Hickman delivered a public lecture entitled **Transport and climate change in London** on Thursday 21st April 2016 between 5:30pm-7:00pm

He also delivered the following lectures:

Wednesday 20th April (10.00-11.00) Wednesday 20th April (11.00-12.00)

Thursday 21th April (9.00-11.00)

Discourses, social practice and urban travel
The instrumental and affective experience of
public transport

Incomplete cost-incomplete benefit analysis in transport appraisal





# **Staff Publications for 2015-16**

- 1. **Attard, M**. Budd, L., Hickman, R. (2016) Introduction to the Special Issue on Climate Change Targets and Urban Transport Policy. (Volume Editors). Research in Transportation Economics. Vol. 55 pp1-2.
- 2. **Attard, M.** (2015) The impact of global environmental change on transport in Malta. Xjenza Online Journal of The Malta Chamber of Scientists. Vol. 3(2) pp141-152.
- 3. **Attard, M., Azzopardi, J.** (2016) Cultural Mapping Tools to Engage. In Fondation de Malte and Valletta 2018 Foundation Cultural Mapping Debating Space and Places. Proceedings of the Second Annual Valletta 2018 International Conference on Cultural Relations in Europe and the Mediterranean, Valletta, 22-23 October 2015.
- 4. **Bajada, T., Mifsud, D.** and Di Ciommo, F. (2016). Accessibility as an indicator of transport equity. The case of public transport infrastructure in Malta, and its impact on the elderly. *Xjenza Online-Journal of Malta Chamber of Scientists*, 4 (1), 72-81.
- 5. Dingli, A., Attard, M. (2016) The Valletta Travel Information Service. Journal of Digital Landscape Architecture. Vol. 1 pp243-253.
- 6. **Bajada, T.**, Titheridge, H. (2016) To contract or to operate publicly? Observations from the bus service reform transition process in Malta. Research in Transportation Economics. Vol. 59 pp281-291.
- 7. **Attard, M.,** Haklay, M., Capineri, C. (2016) The potential of Volunteered Geographic Information (VGI) in future transport systems. Urban Planning. Vol. 1(4) pp6-19.

# **Participation in Local and Community Events and Initiatives**

#### TV and Radio Contributions

During the year Prof. Maria Attard contributed to a number of television and radio programmes to raise awareness and discuss issues related to sustainable mobility. Programmes included TVAM (PBS), Newsbook (RTK Radio), Għandi X'Ngħid (Radju Malta), NET Television, Super One Television and Campus FM.





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