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Wishing you a very Merry Christmas and a Happy New Year

**The Integrated Sustainability Analysis team would like to thank you
for all your support during 2009.**

Best wishes for 2010!

[ISA Activity](#)



The Integrated Sustainability Analysis team wins the 2009 Green Globe - Public Sector Sustainability Award

The Integrated Sustainability Analysis (ISA) team within the School has won the Green Globe Award 2009 in the public sector sustainability category.

The [ISA](#) team were awarded for its contribution to sustainability research in NSW and globally by making the measurement of the carbon footprint of businesses and organisations more accurate and efficient. The ISA method and software tool fundamentally integrates the accounts of an organisation into a national economy. This allows the complete accounting for all economic, environmental and social supply chain.

To read more, click [here](#).

ISA anticipated emissions equity decade ago

According to the British Newspaper *Guardian Weekly* (17 July 2009, page 7),

“The Group of Eight industrialised economies, including America, last week agreed for the first time that they must limit worldwide temperature rise to no more than 2C ... Ban Ki-moon, UN secretary general, criticised all sides for not being more ambitious. The world had to agree a cut of at least 50% by 2050, he

said ... Implicit in such a 50% reduction for the world is a demand that developed countries cut their share by 80%. That is not ambition, that is mathematics. To reach the average 50% decline, the bigger polluters need to make bigger cuts."

In their 1997 article "Who cares about climate change?", ISA's Chris Dey and Manfred Lenzen proposed exactly the level of greenhouse gas reductions which are now advocated by the UN secretary general.



World 1st Human Input-Output Table

Forty second-year Chemical Engineering students formed the world's first ever human input-output table during a recent lecture on TBL reporting. The total Australian economy was compressed into five sectors: Agriculture (Green hats), Mining (Black hats), Manufacturing (Blue hats), Utilities (Red hats) and Services (White hats). The Brown, Pink and Yellow hats represented the satellite accounts for Land disturbance, water and greenhouse gas emissions. Other students were enlisted to 'spend' \$1000 in any one of the sectors. Students in the input-output table identified and built a single structural path precipitated by the spend. They calculated the emissions generated, or water or land needed, five layers up the supply chain from that one single path.

Update on: the GHG Protocol Project

Two issues back you would have [read](#) about ISA's input into the Greenhouse Gas Protocol Technical Working Group discussion on sectoral value chain mapping of emissions by purchased categories. The WRI/WBCSD GHG Protocol would like you to be involved in the process; taken from <http://www.ghgprotocol.org/standards/product-and-supply-chain-standard>:

"Following the success of the Corporate Standard and Project Protocol, the WRI/WBCSD GHG Protocol is developing two new standards for product and supply chain GHG accounting and reporting.

To develop the new standards, the GHG Protocol is following the same broad, multi-stakeholder process used to develop our previous standards, with participation from businesses, policymakers, NGOs, academics and other experts and stakeholders from around the world.

The new GHG Protocol standards will provide a standardized method to inventory the emissions associated with individual products across their full life cycles and of corporate value chains, taking into account impacts both upstream and downstream of the company's operations. By taking a comprehensive approach to GHG measurement and management, businesses and policymakers can focus attention on the greatest opportunities to reduce emissions within the full value chain, leading to more sustainable decisions about the products we buy, sell, and produce."

To be involved in the process visit the link provided above.

[^ Education and Training](#)

ISA Units of Study at the University of Sydney start Semester 1, 2010

ISA Units are available as electives in the Master of Sustainability (MSust) Grad Cert and Grad Dip Sustainability commencing in Semester 1, 2010. For details please see ...

Units of Study can be found by doing a search by unit codes:
PHYS5031, PHYS5032, PHYS5033, PHYS5034 at:
<https://ssa.usyd.edu.au/ssa/handbook/uossearch.jsp>

The Master of Sustainability program can be found at:

http://www.usyd.edu.au/handbooks/science/30_sustainability_degrees.shtml

If you would like further information please call Joy on +61 (0)2 9351 2627 Wednesdays – Fridays.

New - Introduction to Input-Output Analysis in Sustainability Reporting Workshop

One day learning program that will provide you with a comprehensive plain-English introduction to use of input-output analysis (IOA) in sustainability analysis and reporting

The aims and objectives of the workshop are to:

1. A working knowledge of what input-output analysis is and how it can assist you in your sustainability work.
2. An appreciation of the strengths and limitations of IOA in accounting for the triple bottom line and carbon or ecological footprint
3. Take away examples of use

To find out more information [click here](#)

^ Consulting

Our aim is to continuously develop and improve in a multi- and inter-disciplinary way scientifically rigorous, quantitative, consistent and comprehensive approaches for Integrated Sustainability Analysis.

If you would like to know more about our consultancy services please contact us via email isa@physics.usyd.edu.au or call us on +61 (0)2 9036 9365 hours 9:00 – 17:00 EST.

^ BL³ News

ISA Software Update

After more than 18 months of fruitful collaboration, ISA is disappointed to announce that the joint venture with Capiotech to create the next generation ISA software tool has failed to reach agreement. We are developing alternative arrangements for the provision of an ISA software tool as soon as possible. We will provide an update on the arrangements in 3-4 weeks.

^ Publications

New book which applies Systems Theory to Social Systems Views from the Inside: Participant Perspectives on Community Leadership

This book tells five stories of a three-year leadership capacity building program designed for residents of government housing estates in Sydney's Eastern suburbs. It tells its stories through the voices of the project leader and four participants. While the project leader explains the workings of the project each of the participants tells how it fitted into their life-story. They talk of their childhood and growing up and sometimes precarious survival at the poor end of town.

The four insider stories are set beside the program's intentions as seen by government funding body and program managers, and the philosophical understanding that underpinned the program leader's actions.

In so doing the book explores the relationship between: one person's theory; a community development program in practice; and real life experience. It does this not through a voice of authority commenting on people's lived experience and attempting to relate this to the theory, but by showing what the program meant to the project leader and what it meant to each of the four participants. It tries to demonstrate, but not explain, how these disparate meanings connected, or otherwise, with the theory that the project leader believed she was applying; and how in the end all knowledge is personal, built up over a life time

and stitched together with the threads of our relationships in whatever environment we happen to inhabit.

To purchase the book visit: <http://thesocialsciences.com/books/bookstore/>

[^ Conferences](#)

Call for Papers: 18th International Input-Output Conference Sydney, Australia 20-25 June 2010

The International Input-Output Association and the Integrated Sustainability Analysis Research Group at the University of Sydney announce that the 18th International Input-Output Conference will be held on 20-25 June, 2010 at the University of Sydney, Australia.

Goal of the conference

The goal of the conference is to promote and stimulate the worldwide exchange of ideas among economists between them and government officials, policy makers, engineers, national accountants and managers with interests in input-output analysis and related methods.

Main theme of the Conference

This conference's main theme is about the repercussions of the current worldwide economic crisis on **economic growth towards sustainability and well-being**; along with the role that input-output analysis and/or input-output based models may play in their quantification. Top experts from this field will participate as plenary speakers to discuss this important topic along with other representatives from national and/or international statistical offices.

Call-for-Papers is now open; please [visit the official conference website](#) for details.

Call for Papers: Workshop on "Machine learning and Data Mining for Sustainable Development" May 1, 2010 Columbus, Ohio, USA

Intelligent Information systems represent more and more powerful solutions to raise the recent challenges concerning economic and environmental sustainability development. In this context, collecting or analysing a mass amount of environmental and economic data is a true challenge. This has led to the development and the consequent application of new methodologies for automatic processing of economic and environmental data to support the automatic decision making process for sustainability development.

Economic and environmental data are often spatial and temporal. Major characteristics of spatial data are its complexity and the level of uncertainty in data analysis, due to natural systems complexity. In the most of the cases, economic and environmental data manifolds are noisy and nonlinear and the relations among the involved variables are often not very clear. Large databases and long periods of environmental observation, monitoring of pollution, rare and extreme events and recent remote sensing technologies entail the use of new analytical and processing tools. Observation only provides the necessary data sets, but a correct interpretation of the monitored phenomena requires a process of knowledge extraction from data aimed to the detection of spatial patterns and underlying relations among the measured variables. This is possible only through a careful machine learning and data mining process.

In order to handle and manage the complex nature of environmental information, special technologies, methods and systems must be developed. The objective of this workshop is to present the recent work or research in the field of machine learning and data mining for the economic and environmental data processing. The topic of the workshop involves cutting-edge machine learning and data mining algorithms and tools, and the application of machine learning and data mining techniques in sustainability development. The workshop includes, but is not limited to the following techniques and real case studies from spatial environmental problems, natural hazards, natural and renewable resources, socio-economic data and other fields of application:

Machine Learning
Artificial Neural Networks
Optimization
Knowledge discovery
Data mining, spatial and temporal data mining
Spatial analysis and spatial statistical models
Geographic Information Systems
Data visualization

Call-for-Papers now open; please [visit the official conference website](#) for more details.

[^ Calculators using ISA Research](#)

Who's using ISA research?

ISA models and results underpin many environmental calculators, website content, reports and other research:

- * [ACF Consumption Atlas](#)
- * [ACF Green Home](#)
- * [ninemsn eco-footprint calculator](#)
- * [1 Million Women](#)
- * [Energy Australia's Carbon Emissions and You](#)



[^](#) This email newsletter is produced by the Centre for Integrated Sustainability Analysis, University of Sydney, Australia. You have received this copy because you have expressed an interest in our services or because your work is in a similar area. Please feel free to forward this email to anyone who might be interested.

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