



Strategic Plan 2012-2014



COLÁISTE NA TRÍONÓIDE, BAILE ÁTHA CLIATH | TRINITY COLLEGE DUBLIN
Ollscoil Átha Cliath | The University of Dublin

www.tcd.ie/tcbr

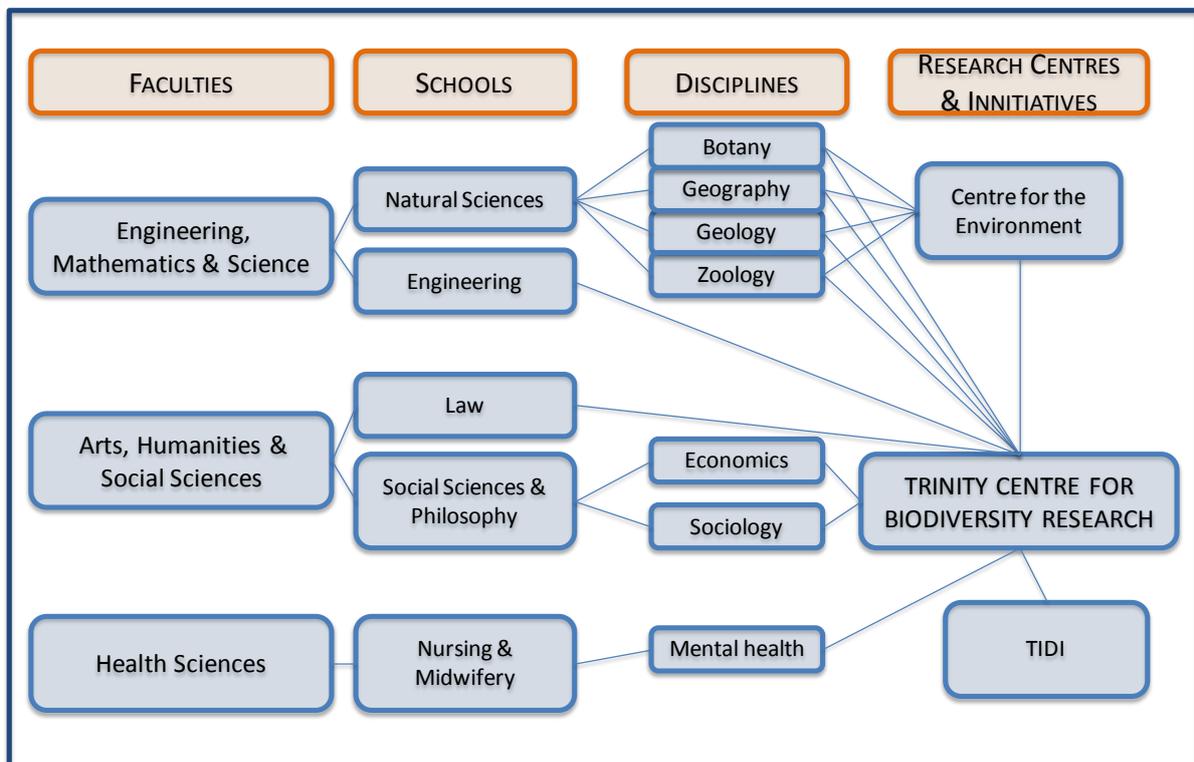
TCBR Strategic Plan 2012-2014

Mission statement

The mission of Trinity Centre for Biodiversity Research (TCBR) is to bring together researchers from different disciplines whose research is on or relates to biodiversity. As a result of synergistic collaborative research, the wide base of expertise in TCBR will provide the critical mass and innovative approaches to deliver excellence in biodiversity research, and knowledge for education (including both capacity building and increased public awareness). Ultimately, our research will be crucial for the development of national, European and international policy and strategic recommendations to ensure global environmental sustainability.

What is the TCBR?

Launched by Sir David Attenborough in 2008, the TCBR brings together researchers from across Trinity College Dublin (TCD) to provide a broad base of expertise in a range of biodiversity research areas (see schematic diagram below and list of TCBR Principal Investigators’ research areas at the end of this document), enabling research to cross traditional disciplinary boundaries to encompass pure and applied biological, social, health, economic, legal, planning and political aspects of biodiversity. The TCBR delivers research primarily under the TCD emergent theme of Transport, Energy and Environment and has the potential to contribute to several recently established cross-college multi-disciplinary thematic research areas including “Sustainable Environment”, “Smart and Sustainable Cities” and “Sustainable Society”. In addition, the TCBR links with existing centres (including the Centre for the Environment) and initiatives (including the Trinity International Development Initiative, TIDI).



The TCBR brings together researchers from diverse disciplines across TCD

Human wellbeing, health, livelihoods, society, economies and development depend on biodiversity and healthy functioning ecosystems to deliver ecosystem services. Research into sustainable provision of ecosystem services has progressed rapidly across the world and requires an interdisciplinary approach. TCD has quality research capability in a number of diverse but relevant areas, and the TCBR provides an innovative opportunity to consolidate this expertise.

The research in the TCBR encompasses three core areas, cutting across disciplines within and between Schools:

- 🌱 Documenting and describing biodiversity: including classical and molecular taxonomy and systematics, field inventory and characterisation of biodiversity, and reconstruction of palaeoecological environments.
- 🌱 Ecology and ecosystem functioning: including understanding physiological responses of organisms to environments, community interactions, spatio-temporal relationships, ecosystem functioning and delivery of services, impacts of climate change and other human pressures (and their interactions) and predictive modelling under global change scenarios.
- 🌱 Biodiversity and sustainable livelihoods: including conservation and management approaches, social and economic aspects, policy, mitigation/control and dissemination.

Current profile of the TCBR

- 🌱 > 20 Principal Investigators (PIs) from six disciplines
- 🌱 Research funding totalling >€7.5 million awarded to TCBR PIs during the period 2007-mid 2012
- 🌱 Approximately 65 PhD students currently working on biodiversity-related topics
- 🌱 Approximately 16 postgraduate students graduating with MScs in Biodiversity and Conservation annually
- 🌱 Approximately 200 peer review research publications by TCBR PIs in the period 2009-mid 2012
- 🌱 National and international collaborations and research sites located around the world



TCBR postgraduate student Eileen Diskin studying antibiotic resistance in flamingos in the Mediterranean. Her research will have impacts not only with regards to wildlife and ecosystem health, but also for human health.

TCBR research locations 2008-2012



What is the role of the TCBR?

The TCBR is valuable at several levels for different participants and stakeholders, including:

- 🌱 **For researchers in TCD:** a broad range of collaborative expertise to develop and successfully complete world-class cutting edge research
- 🌱 **For external national and international researchers:** TCBR comprises a hub of biodiversity expertise and facilities for collaborative research projects and joint publication
- 🌱 **For researchers wanting to join TCD:** established links both within and outside of TCD provide a network of experts who can provide advice and opportunities for collaboration; plus a dynamic postgraduate community whose activities, in part, aim to bridge the gap between biodiversity research and the outside world
- 🌱 **For funding agencies:** a critical mass of interdisciplinary biodiversity expertise to enhance the knowledge-based economy and meet the challenges and opportunities presented by a rapidly changing world
- 🌱 **For decision-makers:** translating biodiversity knowledge into policy instruments
- 🌱 **For the general public/wider society:** several benefits including i) a sound knowledge base, ii) a focal contact point for the media on biodiversity-related issues and iii) points of contact which can be used by individuals and civil society, e.g. to promote biodiversity conservation in local communities

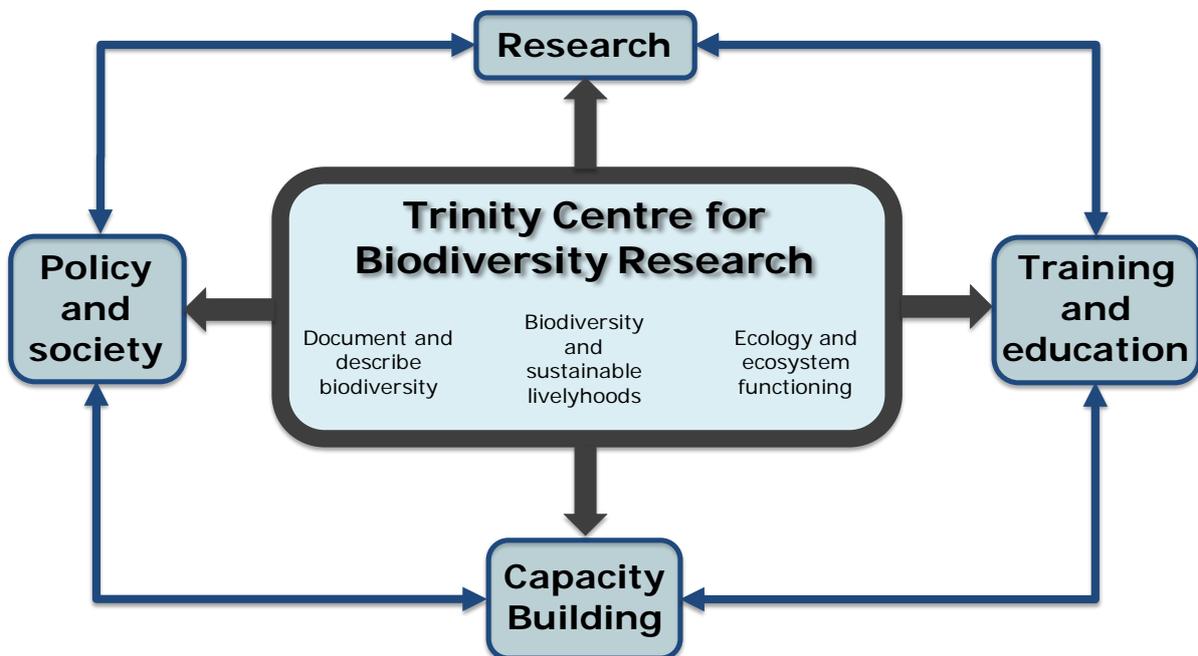


Bioenergy crops: the fuel of the future? Understanding the development, use and impacts of bioenergy requires research by engineers, biologists, economists, political and social scientists. The TCBR can bring together these disciplines to deliver research excellence in this and many other areas.

Strategic vision for TCBR:

To realise the potential for the TCBR, our strategic plan is to:

- 🌱 Enhance the quality and quantity of research on biodiversity across a wide range of disciplines. This will be achieved by networking to facilitate research development, research activities and knowledge transfer across a range of levels to improve research, training and education, capacity building and policy development.
- 🌱 Intensify and expand appropriate links both within and outside TCD, in Ireland and internationally.
- 🌱 Become recognised as the leading interdisciplinary biodiversity research group in Ireland.



This will be achieved through short to longer-term goals. Goals for the period 2012-14 are:

- 🌱 Secure national, European and international high quality collaborative research funding;
- 🌱 Reinforce appropriate links within TCD, e.g. among ecological scientists, economists, environmental engineers, health workers, lawyers and political scientists;
- 🌱 Strengthening links outside TCD, e.g. with the National Biodiversity Data Centre, the National Parks and Wildlife Service, relevant government departments, the National Botanic Gardens, the Irish Wildlife Trust, BirdWatch Ireland, and other appropriate environmental NGOs, within Ireland;
- 🌱 Strengthening links internationally, e.g. with the EU Joint Research Centres, Diversitas, Intergovernmental Panel of Biodiversity and Ecosystem Services; and
- 🌱 Increase college, public and political awareness of biodiversity and its role in the delivery of fundamental ecosystem services.

TCBR Principal Investigators and areas of expertise

Researcher	Discipline	Research keywords
Dr Norman Allott	Centre for the Environment	Ecology of surface waters
Dr Natalie Cooper	Zoology	Ecology, evolution, phylogeny, species traits, geographical ranges, mammals, primate parasites
Prof Anna Davies	Geography	Environmental governance, biodiversity conservation policy and politics
Prof Mark Dyer	Engineering	Innovative solutions for buildings, neighbourhoods and cities
Dr Alison Donnelly	Botany	Phenology, climate change effects on phenology
Dr Ian Donohue	Zoology	Ecosystem functioning and stability, perturbations, applied ecology, aquatic ecosystems
Prof Nick Gray	Botany	Water and wastewater treatment, river pollution assessment and control, assessment of carbon emissions
Dr Laurence Gill	Engineering	Environmental engineering, water management, pollution
Prof Celia Holland	Zoology	Parasitology, public health
Dr Trevor Hodkinson	Botany	Forest tree genetics, molecular biology and genetics
Prof Mike B. Jones	Botany	Climate change, carbon balance, biofuels
Dr Andrew Jackson	Zoology	Ecological and evolutionary systems modelling
Dr Daniel Kelly	Botany	Plant evolution, tropical plant ecology
Prof Fraser Mitchell	Botany	Ecology, palaeoecology
Dr Nicola Marples	Zoology	Captive and predatory animal behavior
Dr Carol Newman	Economics	Applied microeconomic analysis of individual and household behaviour
Prof John Parnell	Botany	Higher plant taxonomy, biodiversity, conservation
Dr John Rochford	Zoology	Conservation biology, mammal ecology, ornithology
Dr Jane Stout (Director)	Botany	Agricultural ecology, bees, ecology, ecosystem services, insects, invasive alien species, plant-animal interactions, pollination
Prof David Taylor	Geography	Ecosystem dynamics, tropical ecology
Prof Jim Wilson	Zoology	Aquatic ecology, marine zoology
Dr Michael Williams	Botany	Soil respiration and carbon stocks, plant cell anatomy
Dr Patrick Wyse-Jackson	Geology	Fossil and living bryozoa, geology, paleontology, paleoecology
Dr Steve Waldren	Botany	Evolutionary biology, plant phenology, genetics