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CENTRE FOR DISASTER RESILIENCE

5 YEAR PLAN

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# Executive Summary

In order to make sure that we continue on the right path toward our main aim of being a global leader in built environment research and education that develops societal resilience to disasters, we need to identify cohesive strategies that effectively address the challenges of declining government funding, intensifying, internal as well as global competition, and increasing compliance and reporting requirements.

Although the external environment for academic research in higher education remains challenging, important drivers of change could substantially increase future risks of disasters, notably the increasing frequency of extreme weather events due to climate change, large population increases in cities exposed to natural hazards, and rising security threats.

These drivers of change are ensuring that addressing the source of disaster risk and developing resilience is a priority for national government and many international agencies, including the UK Research Councils, the European Union, and National Overseas Development Aid Organisations.

Key stakeholders, such as national governments, local government associations, international, regional and civil society organisations, donors, the private sector, and professional associations are being challenged to make their cities safe from disasters.

As a multi-disciplinary centre committed to improving the ability of countries and communities to plan for and recover from natural and man-made disasters, the Centre for Disaster Resilience is well placed to support these key stakeholders in developing the capacity of society to stand firm or adapt to reduce people’s vulnerability to hazard and to enable society to continue to function economically and socially when hazards occur.

The Centre has been effective in adapting to address research priorities of major funders, undertaking prestigious research projects and developing strong inter-disciplinary relationships in key markets, particularly South Asia and Europe.

However, the Centre has narrow expertise internally which may be easy to replicate, and has also been reliant on a small number of staff to generate income, and develop and sustain key partnerships. The league table positon of the University remains a concern as we look to further develop our key relationships with leading institutions globally, while the difficult financial environment threatens to retrict the resources necessary to support our ambition. The current uncertainty surrounding the position of research within the University and an increasing culture of centralisation has reduced staff morale, raising concerns that we will lose key staff to other institutions.

Despite these threats, there remain considerable opportunities to exploit existing and developing networks that we now lead. Our increasing profile globally puts us into a strong position to influence Horizon 2020 agenda and establish ourselves as a centre of excellence for doctoral studies in disaster resilience.

Our strategic priorities to tackle these challenges and capitalise on these opportunities, and thereby help us achieve the goal of being a global leader in built environment research and education that develops societal resilience to disasters, are to:

1. Increase CDR research award income year on year
2. Increase the number of PGR students supervised by CDR staff
3. Increase the quality of CDR publication outputs in terms of originality, significance and rigour
4. Further develop and sustain relationships with key stakeholders with a view to maximising income and value, and influencing policy direction
5. Implement activities to support the Centre’s Early Career Researchers and improve mentoring of staff, and PGR supervisory capabilities for Centre members
6. Host targeted external engagements with key stakeholders (nationally and internationally) from academia, the private, and the third sectors

These priorities require investment for staff development, including conference attendance and networking, the recruitment of senior academics to diversify internal expertise, and an administrator to support increasing reporting requirements and to facilitate event hosting and organisation.

In return for this investment, the Centre for Disaster Resilience will maximise income and value to the University, delivering high quality research in terms of originality, significance and rigour, and converting research outcomes into evidence-based impact that is outstanding in terms of reach and significance.

*Professor Dilanthi Amaratunga*

*Professor Richard Haigh*

*16 May 2013*

# Centre Description

## Background

The Centre for Disaster Resilience (CDR) is part of the School of the Built Environment at the University of Salford, the highest-rated build environment research institute in the UK and number one for research power, a position held since 1992.

CDR is a multi-disciplinary centre committed to improving the ability of countries and communities to plan for and recover from natural and man-made disasters.

CDR was formally established in 2008 under the leadership of Professor Dilanthi Amaratunga, although members of the Centre have been working in this field during the last ten years. In particular, the 2004 Indian Ocean Tsunami highlighted the need for work in this area due to the scale of reconstruction activity required following a disaster of this magnitude. Sri Lanka, a country severely affected by the 2004 Tsunami, was a feature for much of CDR’s early work. Since then, our work has expanded to address disaster risk globally, and we work closely with partners in South Asia, Australasia, Europe and North America.

## Membership

The composition of CDR is diverse, with members representing varied research interests. A summary of key research interests is provided below:

|  |  |
| --- | --- |
| * Disaster mitigation and reconstruction * Conflict sensitive reconstruction * Disaster risk reduction * Knowledge management in disasters * Disaster management education * Business continuity management and impact of small businesses * Flood protection | * Empowerment of women and prevention of vulnerabilities * Stakeholder management * Information systems and communication in disaster prevention and mitigation * Modeling of disasters |

There are two types of membership: core membership and associate membership. There are currently eight core members and over twenty associate members.

The core members have made a commitment to developing the work of CDR. They are engaged in relevant research and scholarly activity, and seek collaboration with other CDR members and other organisations in order to develop research proposals and other activities.

Any colleague who has interests in CDR activities can become an associate member of CDR and get an opportunity to become part of a vibrant research community of like-minded researchers and scholars.

## Market Environment

Research has evolved in response to internal and external pressures and will continue to do so; the foundation of success of academic research rests on a high degree of programmatic self-direction, a competitive environment that rewards success, and an entrepreneurial approach to attracting the resources necessary to be successful.

We are operating at a time where public funding of academic research paused in its growth. However, never before have research centres have faced the combined pressures of: declining government funding, intensifying, internal as well as global competition, and increasing compliance and reporting requirements.

In this context, there is a need to identify cohesive strategies to effectively address challenges to sustain our competitive advantage there also a need for collaborative action and a shift of focus toward research productivity. Some of the key challenges include:

* Hypercompetition and complexity
* Compliance and indirect cost recovery
* Research quality and impact
* Planning and decision support
* Value of the research university
* Fragility of research administration and leadership

## Features of the Centre

CDR is ***working with communities around the World to increase their resilience to the threat posed by human and natural induced hazards***.

The term *Resilience* has been adopted by policy makers, industry and academia in an attempt to describe the way in which it is possible to reduce a nation’s susceptibility to major incidents of all kinds. Resilience means trying to reduce the probability of these events occurring and their likely effects, and building institutions and structures in such a way as to minimise any possible effects of disruption upon them.

CDR is instrumental in developing a world in which governments, authorities, businesses, communities and individuals work together to ***create a society which is able to withstand the effects of unforeseen events and threats***.

Our vision is for a built environment which has the capacity to stand firm or adapt to reduce people’s vulnerability to hazard and which can enable society to continue to function economically and socially when hazards occur.

Disasters have the ability to severely interrupt economic growth and hinder a person’s ability to emerge from poverty. The protective characteristics of the built environment offer an important means by which humanity can reduce the risk posed by hazards, thereby preventing a disaster. Conversely, post-disaster, the loss of critical buildings and infrastructure can greatly increase a community’s vulnerability to hazards in the future.

Although CDR has a strong emphasis on the development of a more resilient built or physical environment, much of our research is ***inter-disciplinary*** and we work closely with other research groups to link these physical requirements with broader social, natural, institutional and economic needs.

CDR undertakes a full range of research styles, from fundamental theory building to highly applied and widely disseminated. Holistic solutions to ***real world problems*** are facilitated by the flow, interaction and creation of knowledge across disciplinary groups and networks.

We have a ***world-wide network of partners*** from policy, government, industry and academia who support our work. We provide ***strategic advice and practical guidance*** based on rigorous research, informed by industry and community members. We work with key stakeholders to design, develop and manage buildings, spaces and places in a way which is sensitive to context.

CDR research has resulted in ***better-informed and more socially inclusive public policy-making & implementation*** in the development of a disaster resilient built environment.

CDR research has ***shaped a global United Nations campaign***, contributed exponentially to the ***development of resources to enhance professional practice*** in the humanitarian sector, including post-disaster reconstruction programmes in Sri Lanka, and led the development of ***new partnerships in Europe and Southern Asia***.

## Partners and other stakeholders

Much of our work is done in collaboration with academic, industry, government and community-based partners, bringing together a range of scientific disciplines and experiences. Examples of these partnerships include:



|  |  |
| --- | --- |
| * UN-HABITAT United Nations Human Settlement Programme * The World Bank * UK Foreign and Commonwealth Office * Royal Institution of Charted Surveyors (RICS), UK * Chamber of Construction Industry, Sri Lanka (CCI) * University of Moratuwa, Sri Lanka * Eastern University, Sri Lanka * Social Policy and Analysis Research Centre, * University of Colombo, Sri Lanka * Regional Public Administration Training Centre, Dhaka, Bangladesh * Patuakhali Science and Technology University, Bangladesh * National Institute of Disaster Management, India * University of Madras, India * Kadambari Memorial College of Science and Management, Nepal * SUTRA Centre for Development Education and Research, Nepal * Kyoto University, Japan * UTM, Malaysia * Indonesian Institute of Sciences, Jakarta, Indonesia * NUS, Singapore * Asian Disaster Preparedness Centre, Bangkok | * The Royal Melbourne Institute of Technology (RMIT), Australia * University of Queensland, Brisbane, Australia * University of Newcastle, Australia * University of South Australia, Australia * University of Western Sydney, Australia * Resilient Organisations, New Zealand * UNITEC Institute of Technology, New Zealand * University of Palermo, Argentina * Federal University of Parana, Brazil * Purdue University, USA * Ball State University, Indiana, USA * University of Calgary, Canada * York University, Canada * University of British Columbia, Canada * Justice Institute of British Columbia, Canada * UNISDR, Geneva * Vilnius Gediminas Technical University, Lithuania * Tallin University of Technology, Estonia * Israel Institute of Technology, Israel * UNHABITAT, Kenya * Stellenbosch University, Matieland, South Africa |

### UNISDR Making Cities Resilient campaign

Professor Dilanthi Amaratunga and Professor Richard Haigh are Academic Advisors to United Nations International Strategy for Disaster Reduction (UNISDR) *Making Cities Resilient* campaign. They have worked to shape and influence policy made by government and quasi-government bodies by contributing to the campaign, which addresses issues of local governance and urban risk. They have advised the campaign with respect to the benefits of resilience and disaster risk reduction in enhancing the effectiveness and efficiency of urban services, the monitoring and reporting of the application of the 10 essentials, and city level disaster risk reduction organisation. These principles were incorporated into the ten essential areas for resilience that are being promoted to mayors and local government from over 1,500 participant cities across the world. In doing so, the centre’s research is supporting local government officials that are faced with the threat of disasters on a daily basis and need better access to policies and tools to effectively deal with them.

### International Institute for Infrastructure Renewal and Reconstruction (IIIRR)

The Centre for Disaster Resilience is a member of the International Institute for Infrastructure Renewal and Reconstruction (IIIRR), a multi-university international consortium, which provides overall leadership in research, education, planning, design and implementation for mitigation of the impact of natural disasters and infrastructure renewal and reconstruction projects in tsunami affected or underdeveloped regions. The Centre leads the social infrastructures theme for the Institute.

### Ministry of Disaster Management, Sri Lanka

The Centre for Disaster Resilience is an advisor to the Ministry of Disaster Management, Sri Lanka. The Centre’s work on post disaster reconstruction, conflict and gender sensitive principles for reconstruction, stakeholder engagement and inclusive development, has influenced professional standards, guidelines and training in Sri Lanka, a country that has been subject to several large scale disasters in recent years, including the 2004 Indian Ocean Tsunami and a civil war spanning three decades. The Centre has been working alongside local stakeholders to develop the capacity of stakeholders to create a built environment that is more resilient to the threats posed by natural and human hazards. This capacity development has been achieved through a series of international conferences and events in Sri Lanka. These events provided guidance and input for the council officers, and construction and humanitarian professionals that attended, and who are working on respective policy changes and plans incorporating disaster risk reduction concepts in their city development plans.

## Awards

CDR work in Sri Lanka on conflict prevention has played a major part in the University of Salford being short listed in the ***Outstanding International Strategy*** category of the ***Times Higher Education Leadership and Management Awards 2013***. This work also contributed to the University receiving a runner-up award in the ***2013 Guardian University Awards*** for its work in helping communities recover from devastating wars.

CDR has been nominated by the Federation of Local Government Authorities in Sri Lanka for the prestigious ***2013 United Nations Sasakawa Award for Disaster Reduction***, which recognises individuals or institutions that have initiated active efforts in reducing and advocating disaster risk reduction in their respective communities.

CDR was also short listed in the ***International Collaboration of the Year*** category of the ***2011 Times Higher Education Awards 2013*** for its work in Sri Lanka, recognising exceptional projects carried out jointly between a British institution and one or more international partners.

## Key Activities, Products and Services

### Funded research

CDR has led and contributed to a wide range of projects within the broad theme of disaster resilience:

* Funding from diverse, prestigious and innovative sources, including EU Framework 7, EU Lifelong Learning, EU Asia Link, European Social Fund, Foreign and Commonwealth Office, British Council and RICS.
* Addressed major local and global challenges such as climate change adaptation, social impact of post-conflict reconstruction, gender, curricular development, knowledge management, continuity planning, and capacity building for resilience.
* Projects carried out in close collaboration with academic, government and non-government partners. Many of our projects are inter-disciplinary.
* CDR is the lead partner in ANDROID: Academic Network for Disaster Resilience to Optimise Educational Development, an EU Lifelong Learning Programme £536,447 grant to support the development of an inter-disciplinary network to promote co-operation and innovation among European higher education institutions to increase society’s resilience to disasters of human and natural origin – such as earthquakes or the damage caused by ongoing wars. The network is a consortium of partners from 64 European institutions from 28 European countries, and is joined by three further institutions from Australia, Canada and Sri-Lanka.
* CDR was recently awarded €300,000 for Collaborative Action towards Societal Challenges through Awareness, Development, and Education (CASCADE), under the FP7 Work Programme 2013 (FP7-INCO-2013-1, INCO-NET). This 18 month grant will be undertaken in conjunction with 17 multi-disciplinary partners across 10 countries and will be used to prepare ground for a future INCONET programme that targets South Asian Countries and promotes bi-regional coordination of Science &Technology (S&T) cooperation, including priority setting and definition of S&T cooperation policies.

### Events

CDR is actively engaged in organising inter-disciplinary international conferences and hosting special sessions in prestige conferences:

* Organised the International Conference Series on Building Resilience, with events held in South Asia during 2008 and 2011. In 2013, the third Building Resilience conference will be held at Ahungalla, Sri Lanka and in 2014, the conference will be held at Salford Quays, the first time in Europe. .
* Facilitate national and international workshops, and deliver keynote addresses and guest speeches at major conferences and events in Europe, Australasia, Southern Asia and North America.

### Networks

CDR leads and contributes to major international networks of academics, policy makers and practitioners in the field:

* Academic Advisor to United Nations International Strategy for Disaster Reduction (UNISDR) Making Cities Resilient campaign, shaping and influencing policy made by government and quasi-government bodies by contributing to the campaign, which addresses issues of local governance and urban risk.
* UK partner of the The International Institute for Infrastructure, Renewal, and Reconstruction (IIIRR), a multi-university international consortium which provides overall leadership in research, education, planning, design and implementation for infrastructure renewal and reconstruction projects in tsunami affected or underdeveloped regions.

### Publications

CDR publishes rigourous, world leading research, as well as practical guidance to enhance professional practice:

* Founding Editors of the International Journal of Disaster Resilience in the Built Environment (IJDRBE), the leading journal in the field. IJDRBE helps to communicate new practical ideas, applications and development details of education and training. The journal reports research that assists capacity-building for reconstruction, renewal and development of sustainable infrastructure, supports proactive and fruitful collaborations and networking among various stakeholders, and helps develop appropriate policy development and plans for implementation. Regular special issues on a range of multidisciplinary subjects keeps readers abreast of topical subjects. Further details can be found at:

www.emeraldinsight.com/products/journals/journals.htm?id=IJDRBE

* Articles in peer reviewed academic journals and at peer reviewed international conferences.
* Edited books and book chapters, and guest edited special issues of international journals.
* Practice notes and professional guidelines for UNISDR, ADPC and UNESCO.
* Our members actively seek to publish in ISI / SCOPUS indexed journals as evidence of our high quality, rigorous research.

### Education and training

CDR supports a range of education and training opportunities:

* Over 30 doctoral students currently being supervised and supported for full time and part time study.
* Short, tailor-made continuous professional development (CPDs) programmes as an important means of knowledge exchange, in conjunction with organisations such as UNISDR, UNESCO, the Ministry of Disaster Management Sri Lanka, and the Chamber of Construction Industry Sri Lanka.

### Impact: How our research contributes to society

Our research has:

* Informed and shaped a global United Nations Campaign to encourage to prepare for potential disasters;

Global strategy: The UN International strategy for disaster reduction (UNISDR) global campaign: “Making Cities Resilient: My City is getting ready!” in conjunction with more than 20 partners helped to improve local knowledge of disaster risk and support capacity building. Salford Professors Dilanthi Amaratunga and Richard Haigh are members of the campaign’s advisory panel. Based on their research, they advised in a number of areas, including enhancing the effectiveness and efficiency of urban services, monitoring and reporting and city-level disaster risk reduction. They also helped to develop a checklist of 10 essential areas for resistance, which are promoted to mayors and local government officials from more than 1,500 cities worldwide.

Our research has:

* Contributed to the development of resources to enhance professional practice in the humanitarian sector across the world
* Shaped and influenced policy made by governments and other official bodies
* Been used to develop resources to enhance professional practice in the humanitarian sector.

Post-tsunami learning: We contributed to a handbook for disaster recovery practitioners developed by the Asian Disaster Preparedness Centre as part of a programme set up to learn lessons after the 2004 Indian Ocean tsunami. A consortium called ‘Global Lessons Learned from Indian Ocean Tsunami Recovery Programme (TGLL) was set up consisting of five of the hardest-hit countries (India, Indonesia, the Maldives, Sri Lanka and Thailand), the UN and the International Federation of Red Cross and Red Crescent Societies. Our research informed guidance on mainstreaming urban disaster risk reduction into urban development, building urban resilience through a city-level action agenda for risk reduction; and advice on policy and legal frameworks and institutional arrangements. The handbook forms the basis of training for a wide range of stakeholders involved in relief and recovery, including the government, UN agencies, the Red Cross, NGOs, academia, civil organisations, donors, technical institutions and communities.

Our research has supported the rebuilding of Sri Lanka after its devastating civil war:

* Developed understanding of how physical infrastructure reconstruction affects social cohesion among people affected by disasters – whether natural or man-made
* Its recommendations have improved how communities recover and strengthened the chances of lasting stability
* Based on an international collaboration which was inter-disciplinary, multi-cultural and inter-sectoral
* The research helped to increase the capacity of local stakeholders to deliver infrastructure reconstruction programmes which were sensitive to the needs of people affected by the conflict.

## SWOT Analysis

|  |  |
| --- | --- |
| ***Strengths***   * Relationship capital globally and in the UK * Inter-disciplinary relationships * Address research priorities of major funders * Flexibility / adaptability to market / agility * Strong research culture within SoBE * Personal relationships in key markets * Editor of key journal in the field * Prestigious research projects * Stability of team * Research makes demonsratble contribution to society | ***Weaknesses***   * Narrow expertise internally * Reliant on small number of staff to generate income / develop and sustain key partnerships * League table positon of University * Mismatch of resources to ambition * Easy to replicate expertise / lack of specialist expertise * Competing priorities within SoBE restricts development of current lecturers and senior lecturers |
| ***Opportunities***   * Exploit existing and developing networks that we now lead * Ability to influence Horizon 2020 agenda, particularly in Southern Asia * Develop or attract complementary human capital to increase opportunity for mono-site proposals * Global centre of excellence for doctoral studies in disaster resilience | ***Threats***   * Current uncertainty of research position within University * Financial position of University preventing investment * Increasing centralisation reduces agility * New entrants into research area and replication of expertise by other Universities * Dilution of efforts across too many countries / regions * Staff morale and loss of staff to other institutions |

## Long Term Aim and Objectives of the Centre

### Aim

Our vision is for a built environment that has the capacity to stand firm or adapt to reduce people’s vulnerability to hazard, and which can enable society to continue to function economically and socially when hazards occur. We seek to achieve our vision by promoting research and scholarly activity that examines the role of the built environment in developing societal resilience to disasters.

Our aim is to be a global leader in built environment research and education that develops societal resilience to disasters.

### Objectives

In order to achieve this aim, our objectives are to:

* Undertake real world, rigorous research that is timely and appropriate
* Produce research outputs that are world-leading in terms of originality, significance and rigour
* Provide strategic advice and practical guidance to policy makers and other stakeholders
* Provide education and training opportunities
* Translate research outcomes into evidence-based impact that is outstanding in terms of reach and significance
* Develop and promote networks for collaboration in teaching, research and engagement
* Draw upon and share expertise and innovation internationally

# Market Analysis

## Market Trends

In the 20 years to 2012, disasters killed 1.3 million people and caused US$2 trillion of damage, more than the total development aid given over the same period. Droughts, earthquakes and storms have been the largest causes of disaster mortality in the last 40 years[[1]](#footnote-1).

Important drivers of change could substantially increase future risks of disasters, notably the increasing frequency of extreme weather events due to climate change, and large population increases in cities exposed to natural hazards[[2]](#footnote-2).

**Growth of cities and human vulnerability:** While the world’s urban population grew very rapidly (from 220 million to 2.8 billion) over the 20th century, the next few decades will see an unprecedented scale of urban growth in the developing world[[3]](#footnote-3). Globally, all future population growth will take place in cities, nearly all of it in Africa, Asia and Latin America – ‘a decisive shift from rural to urban growth, changing a balance that has lasted for millennia’. By 2030, the towns and cities of the developing world will make up 81 per cent of urban humanity. The benefits of urbanization are not equally enjoyed by all segments of the population; left out are those who traditionally face social and economic exclusion – women and ethnic minorities, for example. This massive increase in numbers of urbanites, coupled with per­sistent underdevelopment of infrastructure for sanitation, utilities, land usage, housing, and transportation will significantly increase human vulnerability.

**Increasing natural hazard threat:** There are wide-ranging origins and causes to the many disasters that have affected communities across the world with ever greater frequency. The term disaster is frequently associated with geo- and hydro-meteorological hazards, such as hurricanes, earthquakes and flooding. Three main categories of natural disasters account for 90% of the world’s direct losses: floods, earthquakes, and tropical cyclones[[4]](#footnote-4). 2012 marked the release of a major report[[5]](#footnote-5) by the Intergovernmental Panel on Climate Change (IPCC), the body of the world's leading climate scientists convened by the United Nations. Their report warns that rising sea levels will increase the vulnerability of coastal areas, and the increase in ‘extreme weather events’ will wipe billions off national economies and destroy lives. The report contains strong warnings for developing countries in particular, which are likely to be worst afflicted in part because of their geography but also because they are less well prepared for extreme weather in their infrastructure and have less economic resilience than developed nations. But the developed world will not escape unscathed – heavier bursts of rainfall, heatwaves and droughts are all likely to take their toll.

**Sustained security threat:** After a very rapid increase between 2003 and 2008, the number of terrorist attacks around the world has levelled off, and casualties from terrorism have marginally declined. But the global threat from terrorism remains high[[6]](#footnote-6). In 2011 (the latest year for which statistics are available), over 10,000 terrorist attacks occurred in some 70 countries, causing almost 45,000 casualties and over 12,500 fatalities. About three quarters of those attacks occurred in the Near East and South Asia; attacks in Africa and the Western Hemisphere were at a five-year high.

While new science has considerable potential to improve the quality of information in the forecasting of many disasters, acting on that advice in a prudent and balanced way will be critical to reducing impacts. Recent reports2 have recognised that much more work is needed to develop reliable measures of resilience which can be incorporated into risk models alongside data on hazards and vulnerability. These measures need to inform decision makers whether a given system is likely to be resilient to a particular future shock. This long-term goal and will require sustained effort from researchers to gather data. It is important to note that, while increasing resilience is almost always desirable, the benefits will not always outweigh the costs and decision makers will need to determine when investment in enhanced resilience is justified.

## Target Groups and Beneficiaries

National and local governments are the institutional level closest to the citizens and to their communities. They play the first role in responding to crises and emergencies and in attending to the needs of their constituencies. They deliver essential services to their citizens (health, education, transport, water, etc.), which need to be made resilient to disasters. However, there is a need for national governments, local government associations, international, regional and civil society organisations, donors, the private sector, academia and professional associations, as well as every citizen to engage in the process of making cities safe from disasters[[7]](#footnote-7).

## Funding Sources

Addressing the source of disaster risk and developing resilience is a priority for national government and many international agencies:

* Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. Running from 2014 to 2020 with an €80 billion budget, the EU’s new programme for research and innovation reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere, including challenges linked to disaster risk, such as demographic change, climate action and secure societies.
* National funding for development aid[[8]](#footnote-8) remains high and in many instances is forecast to increase. For example, the amount the UK spends on aid will hit £11.3bn, 0.7% of gross national income (GNI) in 2013. In 2011–12, Australia provided AUS $4.8 billion worth of official development assistance, but continues to increase aid in line with other donor countries. By 2016–17 the annual aid figure is estimated to reach around AUS $8–9 billion. The bulk of bilateral aid flows through intermediaries such as NGOs and priority for aid programmes frequently address issues linked to disaster risk, such as poverty, climate change adaptation and security.
* The Global Uncertainties (GU) theme is a long-term 10-year (2018-2018) RCUK cross-council activity led by the ESRC on behalf of the seven sponsoring research councils. EPSRC is one of the participating councils. The theme addresses global threats to security including those to critical infrastructure, terrorism and crime.

## Profile of Competitors

There are few direct competitors within the UK, but with a strong focus on developing countries and has a strong humanitarian theme but no specific emphasis on construction.

* The UCL Institute for Risk and Disaster Reduction, UCL
* Disaster and Development Centre, Northumbria University
* Civil and Building Engineering, Loughborough University
* Centre for International Studies, Oxford University

By working together, we need to address some of the key challenges and also facing the competition. “our next step need to focus our attention on the development of realistic and sustainable solutions,” “Our ultimate goal is sustaining and enhancing the current health and future well-being of University of Salford and its research.” It should be noted that our strategic relationships with relevant overseas partners not so easily replicated by others.

# Strategy

In order to meet the goal of being a global leader in built environment research and education that develops societal resilience to disasters, we identify the following strategic priorities:

1. Increase CDR research award income year on year
2. Increase the number of PGR students supervised by CDR staff
3. Increase the quality of CDR publication outputs in terms of originality, significance and rigour
4. Further develop and sustain relationships with key stakeholders with a view to maximising income and value, and influencing policy direction
5. Implement activities to support the Centre’s Early Career Researchers and improve mentoring of staff, and PGR supervisory capabilities for Centre members
6. Host targeted external engagements with key stakeholders (nationally and internationally) from academia, the private, and the third sectors

| **Strategic Areas** | **Key Initiative(s)** | **Action Plans** |
| --- | --- | --- |
| ***Research Award income*** | To increase research Award income to £ 1m/year by 2017  Increase research income per staff from £35k/year to £45K/ year by 2017  To increase the percentage of staff contributing to research award income of the Centre  Increase Bidding Success rate | To identify, circulate, and promote appropriate funding opportunities to Centre Staff  Diversify sources of research income.  Organise, monitor and promote University’s peer review process  Organise quarterly research bidding seminars and surgeries  Quarterly monitoring of research performance and Bidding/Award’s meeting  Increase multi-disciplinarity and team working (across research centres, schools and colleges) in bidding; identify and promote opportunities to staff  Provide appropriate training, to staff on bid writing and development.  Identify, inform staff and promote technical and administration support in bid preparation for grants offered  Develop and Implement a comprehensive development programme (including through training; mentoring) to support Researchers |
| ***PGR Student Recruitment*** | Increase number of PGR Students in CDR by 15% by 2017 (and maintain quality of PGR Intake in the process)  Improve quality of PGR Intake | To effectively work with IT Services and Marketing to improve web access for potential PGR applicants interested in the centre  Identify PGR Recruitment champions - focus on targeted countries and Research Areas/themes. Also, align with SoBE Internationalisation Strategy on recruitment of PG students for CDR themes |
| ***PGR Completion Rate*** | To improve PhD completion rates to 100% by 2017 | Distribute completion progression data to supervisors and monitor the progess  Reinforce the importance of completion rate to PGRs at all inductions; Training sessions  Continue to offer CDR specific training to all Students.  Develop and implement CDR PGR staff supervisory training as a means of improving quality and consistency in PGR supervision – with a view of raising student progression and completion rate. |
| ***Externalise Research Output/Outcomes and improve impact*** | Externalise Research outputs/outcomes. Convert research outcomes to financial benefits and link to CPD and income generating activities. | Align the externalisation of research outcomes to CDR Strategy on Enterprise and engagement  Establish process and templates to capture and monitor the impact of research in accordance with REF 2014. |
| ***Quality of Published Outputs*** | Increase quality of publication outputs from GPA of  3\*  to 3.5 \* by 2017 | Develop and implement writing skill surgeries; and drawing from experiences from Journal Editors, Reviewers of Journals, and colleagues who have been successful in publications at 3\* and 4\* levels. Also promote and encourage staff to attend similar programmes organised by the University  Assess frequency of quality publications submitted by staff through PDR Exercise  Encourage joint publications within research centres  Identify and communicate high impact journals where colleagues could publish in/publication outlets . Communicate to all on a quarterly basis  Identify and circulate the key criteria (and some tips) that Reviewers and editors consider when reviewing top journal articles – disseminate quarterly, and widely to CDR  Citation indicies on CDR publications from the Web of Science from Thomson Scientific, Scopus from Elsevier and Google Scholar from Google |
| ***Research Capability; and Capacity*** | Improve and sustain research capability and capacity in CDR  Develop in the CDR, a comprehensive and robust plan and sets of activities to support Early Career Researchers and improve mentoring of staff, and PGR supervisory capabilities. | All Early Career Researchers to be formally allocated to a mentor  Support the development of an Early Career Researcher through allocation of an appropriate Workload Allocation  Significantly improve closer multidisciplinary efforts and team work across areas in school and college  Significant importance to be placed in research capability in CDR themes in the recruitment of staff to SoBE |
| ***Research Engagements and Networks*** | Improve targeted external engagements in research and innovation with partners (nationally and internationally) from academia, private, public, and the third sectors – with a view to maximise income and value. | Identify 12 top research partners and networks already working with CDR; and develop specific and targeted plans to realise improved benefits – especially through (i)income generation; (ii) joint publications and (ii) improved impact of research outcomes/outputs  Encourage targeted Visiting Research Scholars and for a Sabbatical spell in CDR  Encourage staff to be involved in “Esteem Valued” initiatives such as CIB activities; Reviewer and Editorial Board Activities; Visiting Professor roles. |
| ***Research Communication*** | Better Publicise CDR Research Activities and Outputs Widely – Internally, Locally, Nationally and Internationally | Develop a 2-yearly CDR magazine  Collaborate with marketing and press office |
| ***Inter- and Cross- Disciplinary Working*** | Develop multi/interdicsp;ianry research propsals with other research centres within the unviersity  Get other research centre input for the 2014 and subsequent Building Resileince conferences | Number of bids submitted across research centres/schools  Non CDR members of Conference Organiisng/Scientific Committees |

# Additional Resource Requirements

## Short Term

|  |  |
| --- | --- |
| Staff development including conference attendance and networking to increase junior researcher potential to generate research proposals / income | £45,000 (£15,000 p.a. for three years) |
| Administrative support (0.25 FTE) | £6,500 p.a. |
| Cross-research events hosting to stimulate preparation of joint research proposals | £10,000 p.a. for 2 years |
| Marketing / brochures | £4,000 p.a. |
| ‘Gold route’ publishing of previous key research outputs (non UK research council) to increase citations (these costs will be built into future research proposals for future outputs) | £10,000 |

## Medium Term

|  |  |
| --- | --- |
| One senior staff appointment to broaden centre capabilities | £65,000 p.a. |
| PhD scholarship to attract high quality early career researcher in emerging research area to broaden centre capabilities | £45,000 (£15,000 p.a. for three years) |

These additional resources will help the Centre for expanding its activities beyond the bondaries of SoBE and the CST via joint meetings and event organisation initially and thereafter, joint research proposals and joint PhD supervision as appropriate. At the moment, there are major limitations which prevent cross school and college interations.

# Supporting Information

Quantitative and qualitative information to be added

## Staff FTE Figures

## Member Awards

## Bidding Summary

## REF Summary

### Papers

### Environment

### Impact

## PGR Data

1. United Nations International Strategy for Disaster Reduction., 2012(a). UNISDR Counts the Cost of 20 years of inaction on climate change and risk reduction. Press Release, 13 June 2012. [↑](#footnote-ref-1)
2. Foresight Reducing Risks of Future Disasters: Priorities for Decision Makers (2012) Final Project Report. The Government Office for Science, London [↑](#footnote-ref-2)
3. United Nations report ‘State of the World Population 2007: Unleashing the Potential of Urban Growth’ [↑](#footnote-ref-3)
4. Munich Re, 2010 [↑](#footnote-ref-4)
5. Intergovernmental Panel on Climate Change (IPCC) 2012 ‘Special report on extreme weather’ [↑](#footnote-ref-5)
6. CONTEST The United Kingdom’s Strategy for Countering Terrorism 2013 Annual Report [↑](#footnote-ref-6)
7. UNISDR Making Cities Resilient campaign [↑](#footnote-ref-7)
8. e.g., UK Department for International Development (DFID) / UKAID, AUSAID, USAID [↑](#footnote-ref-8)