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30.06.14

**Re: Submission to the Draft National Risk Assessment 2014**

Dear Taoiseach,

An Taisce welcomes the publication of a Draft National Risk Assessment 2014 (NRA) and would like to make the following comments which we request the Department take into consideration.

It is also requested that the Department make known to An Taisce any further consultation periods regarding the making of the DNRA and issue An Taisce with notification of any proposed amendments to the DNRA.

This submission is the outcome of significant consultation with and contribution by members of An Taisce, particularly our Climate Change Committee<sup>1</sup>.

Yours sincerely,

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<sup>1</sup> <http://www.antaisce.org/publications/climate-change-committee-terms-reference>

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# Submission to the Draft National Risk Assessment 2014



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# 1.0 Introduction

The NRA will provide a key policy document of central importance for a critical period in Irish society and will form a contract between the government and the wider community embodying a promise to make our country more resilient and ensure the mistakes of the past are not repeated as well as future dangers prevented or their impacts mitigated as far as possible.

It is now two decades since the 1992 Earth Summit in Rio de Janeiro where scientists warned humanity that *'no more than a few decades remain before the chance to avert the threats we now confront will be lost and the prospects for humanity immeasurably diminished'*<sup>2</sup>. In terms of actual action (as distinct from debate and policy formulation), the worldwide response to these messages from those in a position to bring about change has been close to negligible minimal.

It is now, therefore, imperative that the NRA set out a clear, rational, evidence-based and plan-led strategy for the future mitigation of risk and address critical emerging global challenges, **most importantly energy scarcity and climate change.**

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<sup>2</sup> <http://www.ucsusa.org/about/1992-world-scientists.html>

## 2.0 Scope of NRA

Climate change and fossil fuel dependence are the interrelated, biggest and defining challenges of our time. We are currently experiencing an environmental and resource crisis that places human development at a crossroads. The consequences of climate change and fossil fuel extraction and combustion are becoming increasingly visible and are being exacerbated by unsustainable economic growth.

The effects of these challenges are, and will continue to be, multi-faceted and systemic. They will have effects on all strands of risk, economic, geopolitical, technological, social and environmental, as identified on Figure 1 of the Draft NRA. Effects include, for example, energy price inflation, increased flooding, increases in the cost of resource dependent production, food shortages and other scarcities.

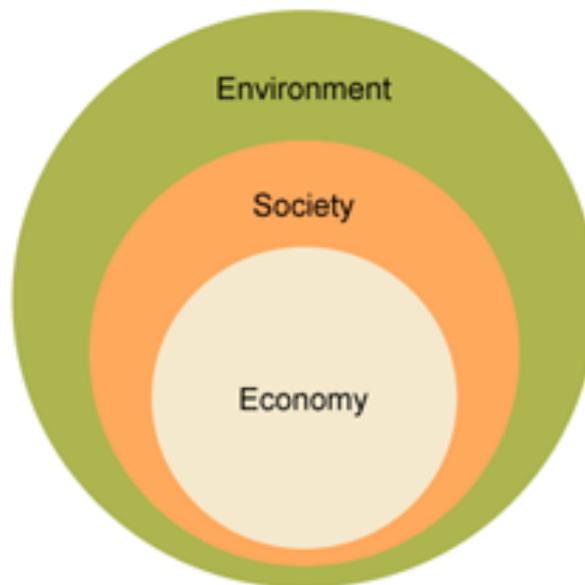
These challenges, and the necessary development of policies to address them, are becoming a reality with which society has to learn to live. Risks of climate change are of a different order than any of the others referred to in the Draft NRA. Climate change is *sui generis* - a category of risk without precedent in human history, one that acts as a threat multiplier in all areas of public policy including investment, property value, economic well-being, social protection, public health and national security.

Therefore, based on the available science it is the view of An Taisce that the primary and overarching risk to be addressed in the NRA must be climate change and fossil fuel dependence with all other forms of risk seen as subsidiary to these.

Furthermore, the NRA should be far more advanced at this stage, given the obvious urgency of climate change as outlined in the Intergovernmental Panel on Climate Change (2013) - Fifth Assessment Report (AR5). The NRA should be moving toward providing both mitigation and adaptation measures, to reduce risk and uncertainty, by acting to significantly reduce Ireland's dependence on oil and its GHG emissions across all sectors and thereby increasing the state's resilience and capacity to survive in a time of energy and climate uncertainty.

## 3.0 System Risks

The Draft NRA places particular emphasis on the importance of the economy. It should be remembered **the economy is a 'wholly-owned subsidiary' of the natural environment** – on the island of Ireland, regionally and globally. An unhealthy environment will result in an unhealthy society and economy and ultimately in collapse of the ecosystems on which society and civilisation depends. Although the link between sustainable economic development and natural resources has been widely ignored and eschewed by conventional economic policy makers, the onset of climate change and energy scarcity is precipitating a long overdue reappraisal of this costly misjudgement.



**The Economy is a subset of the Environment and Society**

Understandably much of the current national political and media focus is on promoting economic development and employment. All mainstream commentators and politicians eulogize the accepted wisdom of the virtues of a return to economic growth as the conventional solution to our current economic, unemployment and fiscal difficulties. However, it should be borne in mind that there is an inherent contradiction between the current model of economic growth and environmental and resource sustainability. Our society is currently locked into an economic system that has a GDP growth imperative that is based on increasing fossil fuel energy demand, increased greenhouse gas emissions, especially from transport and agriculture, and increased resource throughput and depletion. **Our ecological debts are as unstable as our financial debts.** Neither is properly accounted for in the relentless pursuit of unsustainably-based consumption growth. This contradiction is placing further pressure on the carrying capacity of the environment to support society and the economy.

Furthermore, GDP economic growth is a highly imperfect and counter-productive measure of human progress as it measures only income and does not account for the consumption of natural capital (resources), social inequality or the significant costs of anthropogenic pollution<sup>3</sup>.

<sup>3</sup> Prosperity without Growth – The Transition to A Sustainable Economy, UK Sustainable Development Commission, 2009

For example, a 2 per cent per annum growth in GDP would mean the carbon occasioned by each unit of economic output would have to be 130 times lower in 2050 than it is today otherwise we cross a threshold in terms of carbon emissions from which future generations are unable to recover. Economic growth is therefore inconsistent with the requirement to abate greenhouse gas emissions or reduce oil dependency. In any event, 2% GDP growth would mean the total size of the Irish economy would double every 35 years. **This is not physically possible in a finite world and we should therefore not be planning for it. To seek to double the size the economy over the next 30 to 40 years is counterproductive; to meet with success with such a wrong-headed objective is to further impoverish our children and their children.**

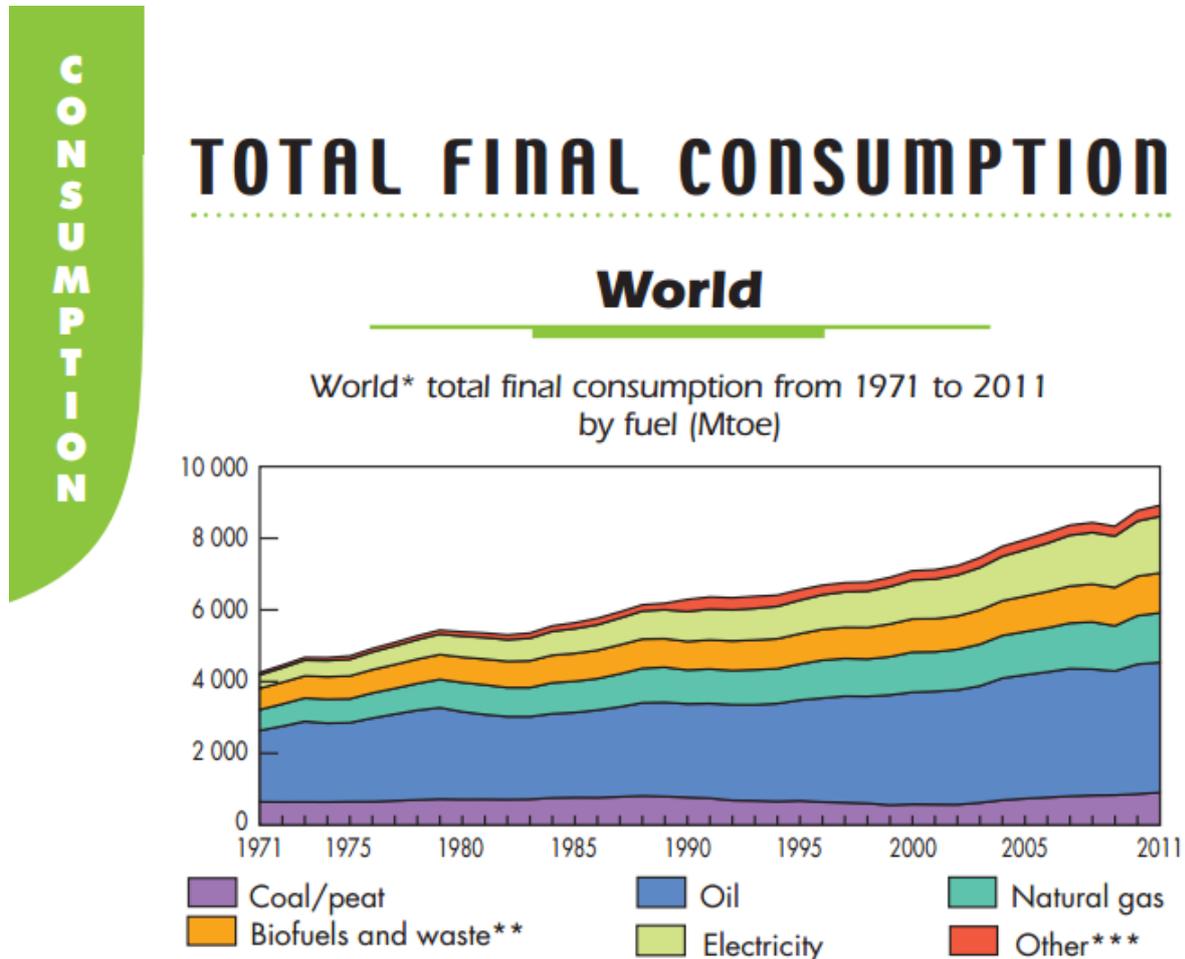
Current Government policy is to promote the Smart Economy and a return to an export-led economy. While this strategy has many virtues it is based on the premise that Ireland cannot compete with manufacturing industries in low-cost developing nations in a globalised economy. As a consequence, the structure of modern developed economies such as Ireland has typically tended to move progressively away from domestic manufacturing resulting in more and more finished and semi-finished goods needing to be imported from abroad and expanding the financial and services sector to pay for it. Of course, this strategy is extremely vulnerable to global economic instability, oil price inflation (for transport) and outsources environmental degradation to less regulated countries.

Current national economic development policies demonstrate a long-term blindness to the limitations of the physical world. Responses to the crisis which aim to restore the status quo are misguided and doomed to failure. Income today means nothing if it undermines the conditions upon which the prosperity of tomorrow depends.

Continued GDP economic growth in the Irish economy is unlikely and, in any event, is unsustainable in the long-term. It is prudent to plan now for a different economic future including low-growth, no-growth or contraction scenarios. The NRA must move quickly to a plan to accommodate higher and more volatile energy prices (and high material costs too) and to use this window of opportunity to transition the country into a post-carbon, low energy, low consumption and resilient state.

## 4.0 Oil-Shock Risk

During the last decade the extraction of oil from conventional well sources peaked. Ireland is one of most oil dependent economies in the world where global energy usage increased by 39% between 1990 and 2008. Further, demand for fossil fuels is increasing, not decreasing<sup>4</sup>.



Ireland is 99% dependent on oil for transport and is amongst the most private car dependent countries in the world. Ireland is also highly dependent on road haulage for freight with only an extremely marginal rail freight infrastructure. The amount of oil used for transportation in Ireland tripled between 1972 and 2002, leaving Ireland consuming at least 50 per cent more per capita than the average of the EU-25 by the end of the period<sup>5</sup>.

The Chief Economist of the International Energy Agency (IEA), Fatih Birol, recently confirmed that peak conventional oil production occurred in 2006. There is growing international consensus, as expressed by Macquarie Bank, Goldman Sachs, McKinsey Consultants, the UK Industry Task Force on Peak Oil and Energy Security, the UK Energy Research Council, IHS Herold, OFGEM, ASPO, Global Witness, the International Energy Agency and the Saudi Oil Ministry together with, most recently, Lloyds Bank that the 'era of cheap oil is over' and that serious supply constraints and an oil supply crunch is likely in

<sup>4</sup> <http://www.iea.org/publications/freepublications/publication/KeyWorld2013.pdf>

<sup>5</sup> [http://www.seai.ie/Publications/Statistics\\_Publications/Energy\\_in\\_Transport/Energy\\_In\\_Transport\\_2009\\_Report.pdf](http://www.seai.ie/Publications/Statistics_Publications/Energy_in_Transport/Energy_In_Transport_2009_Report.pdf)

the short- to medium-term. The Hirsch Report commissioned by the US Department of Energy in 2005 highlights very clearly that the era of plentiful, low-cost petroleum is approaching an end. World demand for oil is predicted to increase by 50% over the period up to 2025 at a time when the world oil reserves are diminishing rapidly and will lead to rapid price inflation and scarcity. According to the IEA, in order to sustain projected global energy demand the world will need to discover six new Saudi Arabias by 2030<sup>6</sup>.

The key issue with peak conventional oil is that it is not an energy crisis so much as a 'liquid fuels' crisis, which will have immediate consequences for the main categories of oil usage, in particular transportation. As Ireland is particularly and increasingly dependent (for exports) on oil for transportation, we are particularly vulnerable to oil price inflation and it is important to start preparing and contingency planning for such an event, given oil has been over \$100 per barrel for three years now (inflation adjusted price is now the highest in 150 years) and the just published British Petroleum report confirms that the future price trend is likely to be strongly upward<sup>7</sup>. The Hirsch Report states:

*"The peaking of world oil production presents the U.S. and the world with an unprecedented risk management problem. As peaking is approached, liquid fuel prices and price volatility will increase dramatically, and, without timely mitigation, the economic, social, and political costs will be unprecedented. Viable mitigation options exist on both the supply and demand sides, but to have substantial impact, **they must be initiated more than a decade in advance of peaking.**"*

More recently, the International Energy Agency - World Energy Outlook published in November 2009 and again in November 2010 confirmed that oil prices are likely to inflate significantly through to 2030 and the continuation of current energy use trends would have dire consequences for climate change together with huge systemic implications for the economy, society and environment. They would also exacerbate ambient air quality concerns, thus causing serious public health and environmental effects, particularly in developing countries.

As confirmed in the Hirsch Report there is no ready alternative to oil for private vehicle use. In this context, debates over substituting oil with renewable, gas or nuclear energy are irrelevant. The widespread replacement of the current vehicle stock with electric powered vehicles is economically and environmentally impractical. The mass production of battery or hydrogen technology capable of the propulsion of electric vehicles, particularly HGVs, is at the very least several decades off and it is most probable that there is no technological solution to this problem.

The preferred raw material for the production of batteries, Lithium, is itself severely resource constrained and found largely in highly environmentally sensitive and politically unstable regions of the world. In any event, the mass production of electric vehicles is wholly resource inefficient and the use of increasingly scarce energy for unproductive uses, such as electric vehicles, would be imprudent. Bio-fuels are not a solution as it competes with food for land and drives up food prices.

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<sup>6</sup> <http://www.worldenergyoutlook.org/media/weowebbsite/2008-1994/weo2008.pdf>

<sup>7</sup> <http://www.incisivecms.co.uk/IMG/722/291722/crude-oil-prices.jpg?1402929263>

Accordingly, any rational analysis of future available oil resources and energy resources would result in an inevitable conclusion that further public investment in oil dependent infrastructure holds a high level of risk and is short-sighted, ill-conceived and an inefficient use of public funds. While we recognise that there remains a considerable straightforward connection in the minds of policy makers and elected politicians as to the economic benefits of road and air infrastructure, the overwhelming international evidence clearly indicates that past trends must not be used as a guide to likely future outcomes. Further investment in Ireland in road infrastructure (outside of road infrastructure maintenance) and the shaping of our society and economy around oil based transport (i.e. dispersed settlement patterns, suburban sprawl, export growth) will inevitably increase and 'lock-in' our exposure to oil price inflation and undermine the resilience of our economy and society in an era of peak oil.

## 5.0 Climate Risk

Instead of investing in energy use conservation and renewable alternatives, the global trend has been to increase the extraction rate of large scale open cast coal mining and extend oil and gas exploration into new areas and with problematic new technologies.

This has resulted in new explorations ranging from the Arctic wilderness to Central Africa. Russia is promoting drilling in the Arctic with the 2010 Deepwater Horizon spill showing the risks involved. The increased level of extraction from Canadian Tar Sands and the Niger Delta is devastating in environmental impact and generates a much higher level of emissions than conventional wells. Fracking in the US has created new environmental risks and has significant impact through methane leakage during the extraction process. Globally energy companies are in an exploration race to secure a level of fossil fuel extraction which is incompatible with the level of decarbonisation required to stabilise global climate at 2°C average surface temperature above pre industrial levels.

In 2012 the Grantham Institute for Climate Change (based in Imperial College London) and the Carbon Tracker Initiative (An International NGO monitoring carbon emissions) published 'Unburnable Carbon 2013: Wasted Capital and Stranded Assets'. This reveals that total fossil fuel reserves already far exceed the global atmosphere capacity to absorb the emissions generated if temperatures are not to exceed 2°C above preindustrial levels.

Beyond the increased certainty about the core science (it's happening, it's us, and it's bad) the AR5 WG1 SPM report makes two significant new headline statements:

1. Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions. (p.17)
2. Cumulative emissions of CO<sub>2</sub> largely determine global mean surface warming by the late 21st century and beyond (see Figure SPM.10). Most aspects of climate change will persist for many centuries even if emissions of CO<sub>2</sub> are stopped. This represents a substantial multi-century climate change commitment created by past, present and future emissions of CO<sub>2</sub>. (p.27)

In other words, all policy in all departments must be judged on the basis of radically reducing the cumulative sum total of future emissions (IPCC WG1). Otherwise Ireland is contributing to greatly increased climate risk, risks that may well be beyond limits of adaptation resulting in intolerable impacts (IPCC WG2). Only acting urgently and radically to cut emissions quickly can limit climate change to below 2°C at least-cost to prevent much greater adaptation costs (IPCC WG3).

Between 60-80% of coal, oil and gas reserves of publically listed companies are unburnable if the world is to have chance of not exceeding global warming of 2°C. The issue is now to achieve an effective global climate agreement and carbon tax regime which will secure this.

Former President Mary Robinson is now taking leadership stating in September 2013:

*'There is a global limit on a safe level of emissions. That means major fossil fuel reserves must be left in the ground. That has huge implications for economic and social development.'*

Ireland has signed up to the 20:20:20 EU agreement whereby we have a legally binding pledge to reduce greenhouse gas emissions by 20% below 1990 levels and increase energy efficiency by 20% by 2020. The scale of change needed to meet Ireland's commitments is enormous. Ireland's national Greenhouse Gas (GHG) emissions reduction target equates to approximately 2.5% per year until 2020. Greenhouse gas emissions from the transport sector have risen 170% over 1990 levels primarily due to spatial sprawl.

The Environmental Protection Agency (EPA) has estimated that in the non Emissions Trading Scheme (ETS) sectors, Ireland will exceed its EU Effort Sharing Directive (ESD) target by 2017 and may have a cumulative excess emissions of 2-20Mt by 2020 in agriculture, transport and home heating. In effect, Ireland is not bothering to co-ordinate any concerted effort to reduce emissions and embrace low carbon development. Furthermore, Ireland has no strategic plan in place to play its part if the overall EU target is to be stepped up to 30% in the context of a global agreement on climate change. The EU Emissions Trading Scheme (ETS) has effectively collapsed by failing to put the climate pollution impact price on carbon.

The NRA must address the challenges of climate change which require urgent reductions in fossil fuel energy use, especially peat and coal, and the associated anthropogenic emissions. It must also address the emerging impacts of climate change across all sectors with particular reference to the areas of land use, energy, transport, water resources, flooding, waste management and biodiversity.

The NRA must also assess and prepare for external risks to Ireland's societal and economic future, especially as such risks have been systematically ignored by the government's focus on risks local to the island of Ireland. For example, the recent NESC-Secretariat Climate Change report focused on extreme weather effects on Ireland but entirely ignored the fact that the far more imminent risks come from potential heat and precipitation effects on harvests in critical international and national food producing areas, especially the USA and Russia, and on resulting global instability due food shortages, high prices and migration.

Furthermore, the NRA must result in a strategy which would see the electricity generation needs of the country primarily met by renewable sources by 2020, and entirely by 2030, including major use of local renewable energy sources, district heating and combined heat and power and energy demand reduction measures. Given high oil and gas prices the investment returns on building retrofit and transportation are therefore now much greater. Increasing resilience to future risks and uncertainty requires much increased investment in system change. The certainty that these investments will pay off to the benefit of Ireland and its people is now greater than ever before.

## 6.0 Supporting Human Wellbeing

### 6.1 Water

Water, including surface, ground and coastal water resources in accordance with the provisions of the EU Water Framework Directive will be an important subsidiary risk to climate change for the government. Human activities have led to deterioration in water quality over many years. Ireland faces an immense challenge in achieving 'good' status in all water bodies by 2015. The achievement of our Water Framework Directive obligations will have linked benefits in the protection and enhancement of biodiversity, combating climate change, improving human health, protecting landscape and creating more sustainable settlement patterns. Irish legislation now provides that government can be sued for failing to meet water quality standards.

The most recent report by the Environmental Protection Agency published in December 2009 (Water Quality in Ireland 2007 – 2008) together with recent publication of the statutory River Basin Management Plans has clearly highlighted the immense scale of the challenge facing Ireland in meeting our binding commitments under the EU Water Framework Directive. This report documents that at least 50% of the water bodies in the country require restoration and that there has been a dramatically high deterioration in Irish water bodies in the last 20 years.

The Intergovernmental Panel for Climate Change (IPCC) has predicted that Ireland will experience more intense and prolonged rainfall events. This has been evidenced by the recent serious rainfall events and flooding throughout Ireland and the UK (an event shown recently to have increased in likelihood from 1 in 100 years to 1 in 80 years due to AGW)<sup>8</sup>. The OPW is currently undertaking a Catchment Flood Risk Assessment & Management Plans (CFRAMS) for all major river systems in Ireland.

The Department of the Environment, Heritage & Local Government has also issued the Flood Risk Assessment and Management Guidelines under Section 28 of the Planning & Development Acts on the management of flood risks and the planning system. This allows for the de-zoning or down-zoning of lands where their development would comprise an unacceptable flood risk.

Conventional hard-engineered storm water management systems to drain surface run-off from asphalt, concrete and roof tiles are costly to implement and maintain. They also frequently fail causing urban flooding and a degradation of water quality. Sustainable Urban Drainage Systems are now becoming the norm throughout Ireland and are mandatory in the Greater Dublin Area. These systems aim to replicate greenfield run-off rates and include measures such as permeable paving, soft detention basins (Swales), rainwater harvesting and green/brown roofs.

The NRA must move toward a suite of integrated policy measures to ensure that legal obligations under the Water Framework Directive and the operable River Basin Management Plan are achieved.

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<sup>8</sup> <http://www.climateprediction.net/weatherathome/weatherhome-2014/results/>

## 6.2 Ecosystems

The NRA has important responsibility under the EU Habitats Directive and EU Birds Directive<sup>9</sup> as brought to light in a number of recent judgments of the European Court of Justice<sup>10</sup>. Ireland has an extremely negative record in complying with EU Environmental Directives.

Biodiversity is a critical ecosystem resource that provides a free service to human wellbeing, our society and our economy, which is not inexhaustible and is under consistent and sustained pressure. Nearly two-thirds of the services provided by nature to humankind are in decline worldwide and the global ecosystem is close to collapse. Ireland's ecosystem services in terms of their productive output and human utility are estimated to be over €2.6 billion per year. This very conservative estimate omits other significant services for example waste assimilation provided by aquatic biodiversity and benefits to human health, social health and environmental benefits. Similar to all critical resources they must be carefully managed to ensure it is sustained as a renewable resource into the future<sup>11</sup>.

Ireland has committed to halting any further reduction in biological diversity under the International Convention on Biodiversity. A new National Biodiversity Plan 2010 – 2015 has recently been published and should be fully incorporated into the NRA.

In order to prevent potential legal action the NRA must rigidly adhere to its substantial legal obligations under EU law. The policy recommendations of the National Biodiversity Plan 2010 – 2015 should be fully incorporated into the NRA.

## 6.3 Human Health & Obesity

Obesity is now a major public health epidemic in Ireland. The Institute of Public Health, in its report titled Health Impacts of the Built Environment, together with the National Obesity Taskforce<sup>12</sup> found that there is substantial evidence to suggest that urban sprawl is contributing to an 'obesogenic' environment with increasing obesity levels as increased car dependency, few opportunities for spontaneous involuntary exercise, longer commuting times and less time for physical exercise become features of life for many people.

Ireland's adult obesity rate (24%) is now higher than in 18 states in the US. Obesity is costing the Irish health service and the Irish tax payer tens of millions of euros each year. Communities that are planned and developed with regard to the health impact of the built environment could enjoy lower levels of obesity, cardiovascular disease, asthma and psychological stress.

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<sup>9</sup> Circular Letter SEA 1/08 & NPWS 1/08

<sup>10</sup> Case 418/04 EC Commission v Ireland

<sup>11</sup> The Economic and Social Aspects of Biodiversity – Benefits & Costs of Biodiversity in Ireland, DoECLG, 2008

<sup>12</sup> Obesity: The Policy Challenges – The Report of the National Taskforce on Obesity 2005

The NRA should take cognisance of the policies included in the recent report prepared by the Irish Heart Foundation – Building Young Hearts: Physical Activity, Young People and the Physical Environment, 2010.

## 6.4 Infrastructural Development

Ireland has significant physical infrastructural deficits, particularly in transport and waste water infrastructure. The former is largely a result of our laissez faire and malleable land-use regulation and permissive approach to market-driven car dependent dispersed development patterns that were not aligned with appropriate infrastructure investment. The latter is as a consequence of a complete absence of any understanding of environmental carrying capacity and the short-term prioritisation of new development over other public health and environmental interests.

The NRA has a vital part to play in ensuring the most efficient use of existing infrastructure and that new infrastructure is provided in the most effective and efficient manner possible. This will require that development be directed to places where infrastructure already exists or can be efficiently and cost-effectively expanded. This principle should apply whether the infrastructure is provided by public bodies or private companies. The future operational costs of infrastructure, e.g. the long-term costs of pumping water services must also be factored in. The need to maximise the return from long-term public investment in infrastructure must be the overriding priority.

In order to address these deficits, the Exchequer is investing heavily through the Capital Investment Programme 2010 - 2016, Transport 21 and the Water Services Investment Programme. However, much of this infrastructure is being designed for a now departed era of energy abundance with no consideration given to the future price of oil or carbon. For example, the current energy bill for a large modern waste water treatment plan can be in the order of €2.5 million per annum. No assessment is being undertaken to ascertain whether this huge Exchequer investment is entrenching deep structural vulnerabilities in our society and storing up major problems for the future.

The NRA must include a detailed audit of all physical infrastructure (i.e. waste-water, potable water, ICT, transport, electricity, etc) including location and capacity, to be used as key criteria in determining the appropriate quantum and location of future new development. The NRA must move toward a clear programme of implementation which links the delivery of key pieces of social, physical and environmental infrastructure with the sequential and phased development of zoned land. It must clearly and transparently inform the citizen and manage expectations about the future development of an area.

A Physical Infrastructure Audit should include an “Oil Vulnerability & Carbon Price Impact Assessment” to explore the threats from inflated and volatile oil prices together with the future (shadow) price of carbon. This should be undertaken for both capital and operational municipal functions (e.g. sewage treatment, water supply, road developments, road repair, flood defences etc)

## 7.0 Social Capital & Public Participation

It is absolutely essential for the NRA to be effective that it is prepared in a transparent manner in partnership with the local community (including children) and stakeholders and is aimed at building consensus. Far too often in the past such consultations have had no meaningful engagement with local communities. The consequences have generally been deleterious to community integration and social capital.

The NRA must be informed by a high level of transparency, democratic participation, community empowerment, and local decision-making and ownership. Furthermore, the objective for those preparing the new NRA should be conciseness, clarity and simplicity in use of language. Any excessive flexibility inherent in the NRA will result in inaction by the department and a document incapable of being applied. This flexibility is evidenced both by vagueness and 'let-out' clauses which causes problems of interpretation.

Bridging the gap between economics, environmental requirements and the wider interests of the common good with local interests can be a process fraught with difficulty and conflict. The Department should appoint an independent facilitator to manage the public participation, consultation process and outcome of the NRA. Communicating risks and planned responses effectively greatly increases the trust between citizens and government.

## 8.0 Implementation & Monitoring

Over the past fifteen years there has been no shortage of very well intentioned policy statement documents published in Ireland by Government, Quasi-Government and Non-Governmental Organisations.

However, the reality has been (and remains) a widespread absence of implementation and an almost complete **divergence between policy and practice**. Policy guidance documents have been heretofore habitually ignored in favour of pressing short-term economic requirements, the requirement to promote commercial rate revenue and lobbying from special interest groups. As a result and it must be recognised, the direct legacy of the recent 'Celtic Tiger' era and associated expansion in construction activity is that Ireland now has one of the most unsustainable, economically inefficient, structurally weak and spatially dispersed settlement patterns anywhere in Europe. **In the current economic circumstances within which Ireland finds itself, there is a very real danger that we will revert to the failed and near-sighted 'all development is good development' mantra of the past without paying adequate attention to the long-term consequences and costs.**

We therefore submit that it is now, more than ever, of paramount importance that the NRA moves beyond the mere rhetoric of commendable policy objectives within the text of the forthcoming NRA and towards **robust targets, actions and measures** to achieve the tangible implementation and a transition to a low-carbon, low-energy and sustainable society. Implementation of policy has been the Achilles heel of development in Ireland and must therefore now at this critical juncture be the focus of the NRA.

In recent years political decision-making has been brought into disrepute while having calamitous consequences. More than ever an NRA is required to address the major challenges of our time. It must be reclaimed with transparent, democratic decision-making.

## 9.0 Conclusion

The NRA must provide a transition to a low-carbon society and economy and to mitigate the significant risks associated with rising energy costs and climate change adaptation. The NRA must be methodical, evidence-based in approach and demonstrate rational 'joined up' assessment of all categories of risk.

Given the clear and present dangers of inaction business-as-usual is no longer an option, system change is required in governance, societal behaviour and economics. We can no longer afford to continue the pursuit of the failed, short-sighted policy approaches of the past and must ensure that our collective future will contribute to reducing avoidable risks and building resilience to damaging impacts.

The international and national economic recession has provided a narrow window of opportunity to take action to concentrate investment and focus policy on the **transition** to a post-oil, low-carbon, globally respectful and locally resilient society. This is the major challenge of our time and requires urgent understanding of the nature and scale of the unprecedented consequences which will confront us if we do not take dramatic action in the near-term.

This will require decisive political leadership and a radical change of direction together with robust and, in some instances, radical policy implementation which only be politically acceptable in the near-term if the risks are effectively communicated to the public. The coordinated actions of the Taoiseach and all government departments are critical to effective action and the statutory planning system, through the regulation of physical development and land use, has a critical role to play in facilitating this **transition**.

The success or otherwise of the forthcoming NRA can only be judged against verifiable and implementable criteria which are subject to ongoing monitoring. We look forward to making further submissions to the NRA in due course.

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