

# Understanding and addressing the Risk Regulation Reflex

Lessons from international experience in dealing with  
risk, responsibility and regulation

*Prepared for the Dutch Risk and Responsibility Programme*

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## 1. Summary

Public risks have long been a driver of public policy – and in fact, many of the most fundamental and useful regulations have found their origin in reactions to risk. There is, however, a feeling and some significant evidence of a worrying trend towards diminishing returns of ever-increasing safety regulations, of “knee-jerk” reaction to incidents and introduction of new rules and procedures that bring little (if any) benefits, but many adverse effects. This is what has been called the **“Risk Regulation Reflex” (RRR)** – in which **decisions are taken too fast, with too little analysis, no regard for alternatives, and fully unrealistic expectations.**

There is a number of factors that drive RRR situations and mechanisms – lack of engagement with the public, **lack of trust** on all sides, **active pressure** of “risk specialists” (with or without commercial interests), prior experiences, ideological preconceptions. Such situations are found in all OECD countries (and beyond), and have produced considerable **adverse effects**, in fields as **diverse** as criminal justice and building safety regulations, terrorism and food safety.

Many jurisdictions have tried to put in place systems and institutions to somewhat **avoid bad policy decisions** – with more or less success. There is certainly no “silver bullet” or “one size fits all” solution, but there are a number of lessons that can be learned from these experiences.

The **foundation** of any efforts to avoid or mitigate the RRR is trust – trust from politicians in the public, leading to real engagement, discussion and transparency – and trust from the public that politicians, officials, scientific advisors tell the truth, and do not dissimulate important facts and findings. Thus, **trust requires transparency**, and transparency begets trust.

The second critical element is understanding, and **clearly presenting trade-offs**. The question should not be whether one is for, or against, more safety – and indeed who would say no? Rather, the questions should be what are the possible options, what are the “knowns” and “unknowns” and uncertainties, and what are the known or potential **costs and benefits** of the different choices.

Developing and implementing mechanisms to **weigh the costs and benefits** of different options, to force scrutiny on policy proposals, and to slow down new regulatory decisions and force a “pause” before them is also important, e.g. through Regulatory Impact Assessment (RIA). The challenges in RIA implementation point to the importance of focusing on **key principles** (whether the regulation is really needed, whether it will work, what are the alternatives and potential downsides and costs), rather than on formalized documentation and calculations, often more burdensome than useful.

**Scientific evidence and advice** are indispensable to a proper assessment of risks, and of the costs and benefits of possible responses – but they can only work properly if their **limitations** are understood, they are used adequately. Science cannot give answers on what values should be prioritized – trying to force a “utilitarian” viewpoint in every situation is a sure recipe for backlash. Hiding uncertainties and conflicting perspectives, particularly if it is later found to have benefited certain interests and harmed the public, is sure to undermine public trust in a lasting way. Finally, public policies would benefit from using science in every regulatory area – while it is usually considered for economic regulation matters, it is often fully ignored when it comes to security and law and order matters.

Finally, **how regulation is implemented** is just as critical as how it is designed. Much of the RRR takes the form of instructions to be “tougher” in controls and enforcement, to do “100% checks” and show “zero tolerance”. Because such approaches are indiscriminate, they squander resources and achieve little. Worse, they harm **procedural justice** and often lead to decreases, not increases, in **legitimacy** and compliance. Smart inspections and enforcement are key to addressing the RRR – as part of a broader “Better Regulatory Delivery”. This requires understanding the limitations of enforcement as a tool, and the need to found it on professionalism and not on political meddling.

## 2. Introduction – the emergence of the “Risk Regulation Reflex” and its relevance as a public policy problem – key issues and outline

### A. Regulations – indispensable, excessive, or both?

In many areas of life, consciously or not, citizens rely on rules and regulations protecting them, and on these regulations being effectively complied with and enforced. Such expectation of protection underpins the trust in the food we eat, the products we buy, and the air we breathe. In practice, however, there is ample evidence that regulations are neither a panacea, nor always as needed as they may seem.

If designed inadequately or with unrealistic expectations, regulations can fail to work. In other cases, market incentives and contractual obligations may be sufficient, without the need for regulation to intervene. Often, implementation is the problem: insufficient guidance and support, or lack of resources for control and enforcement, or wrong methods, can all lead to disappointing levels of compliance. But there clearly remain “market failure” situations where regulations are indispensable to ensure safety and protect the public interest and where, if well designed and implemented, they can be very effective. Likewise, for some of these regulations, inspections and enforcement by state authorities are indispensable to promote compliance and, if done with the right methods, can ensure that regulatory goals are reached.

Over the past two decades, tools and methods of “better regulation” have been developed and put in practice to ensure that existing and new regulations are of the efficient and effective kind. Somewhat more recently (but since at least 10 years), these improvement efforts have also extended to the whole “regulatory delivery” sphere, all the actions and tools that aim at turning regulation into practice, in particular regulatory inspections and enforcement. In spite of these tools and efforts, however, many new laws and regulations continue to be adopted that fail to pass muster in terms of necessity, cost-benefit and other key criteria, and political decisions on delivery tools and methods (licenses, permits, inspections, enforcement approaches) are also frequently at odds with evidence and best practice, disproportionate, inefficient, or frankly counter-productive.

In many (possibly most) cases this happens because regulations, decisions, priorities are pushed through in response to sudden accidents, crisis situations, in a kind of panic reaction that has been called the “risk regulation reflex” (RRR). Unfortunately, solid statistics on regulations, and on how many may have been adopted as a result of such “reflex” situations, are hard to come by. Anecdotal evidence, as well as important studies<sup>1</sup>, strongly suggest however that the RRR is a significant cause of inadequate policy responses – either directly (new rules developed in the immediate aftermath of the event), or by making their way into the election platform of a party, and being introduced after an election victory. In all cases, what happens is that political priorities trump analysis and evidence, and that these political priorities are defined based on risk avoidance and “absolute” statements (“this risk is unacceptable” and “this should never happen again”).

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<sup>1</sup> See e.g. Productivity Commission 2012 – page 316. All this work owes a lot to the work of the UK’s Risk and Regulation Advisory Council, which is presented more in depth in chapter 5. See RRAC 2009 (series of publications) in bibliography section.

## B. Elaboration and definition of the Risk Regulation Reflex concept

Over 2008-2009, originally as part of the Netherlands' Inspection Reform Programme, increasing focus was put on exploring "overreaction to risk" and how to address it, building on the UK RRAC's work (van Tol 2012). This led in November 2009 to the creation of what came to be called the "Risk and Responsibility" programme (van Tol 2012, 2013) – in Dutch "*Risico's en Verantwoordelijkheden*". Prof. Margo Trappenburg coined the "Risk Regulation Reflex" concept in an essay she prepared for the "Day of Risk" conference, organized in May 2010 by the Risk and Responsibility programme (*ibid.*). The term was found to resonate with many people (while eliciting defensive responses in others), but required more precise definition. The Risk and Responsibility programme has come to define it thus (van Tol 2012): "the term 'risk regulation reflex' refers to the mechanism which leads to disproportionate government interventions surrounding a risk or following an incident. A corollary of the risk regulation reflex is that preventing, avoiding or compensating for risks is often seen as a government responsibility by default".

As we will discuss further in this report, there is some discussion as to whether such RRR responses are overall on the rise or not, whether the volume (and consequences) of poorly-designed policy responses they produce is increasing or not – and overall it is very difficult to quantify how large the effect of such policies is (see Helsloot, Schmidt 2012 and UK National Audit Office 2011). Available evidence however suggests that the importance of the RRR is significant – not only in economic terms, but also because excessive regulation undermines the legitimacy of public action, both because it hinders legitimate private activity, and because it fosters the illusion that the government can achieve "perfect safety", which is bound to be disappointed ("it can hinder society's self-reliance and resilience, restrict the freedom of citizens and businesses, diminish the government's authority as a result of promising too much" – van Tol 2012). In addition, a negative impact on the economy in turn will have significant negative impact on safety and health – as pointed out by Helsloot and Schmidt (2012): "life expectancy is strongly related to a person's income (...). Life expectancy actually increases up to seven years for people with a higher income compared to people which are poor, and the difference in the number of years the two groups experience a good health is as much as 16 to 19 years. A safer society, at least if we define safety in terms of average life expectancy, can consequently be reached by boosting prosperity in lower income groups" (see also Mackenbach, Kunst, Cavelaars 1997).

The RRR concept can apply to both "short term" incident responses, and to the broader, "long term" trend towards ever more safety. It can designate "a trend towards ever more far-reaching safety measures which carry the chance of imbalance between the gain in safety and the costs and side effects of the measure, and the pitfall of public demand for a swift response following an incident leading to disproportionate measures" (van Tol 2012). From our perspective, both aspects are essentially linked: disproportionate responses to incidents are made possible by a context of "risk aversion" and, in turn, successive incident responses end up building a trend. In this report, we will focus primarily on cases that involve responses to specific incidents, as they are particularly illustrative of the mechanisms at hand, and of the different patterns observed in responding to risk. When considering possible ways to address the RRR, however, we will look at ways to change as much responses to incidents, as well as risk and uncertainty management by public authorities more broadly.

### C. An illustration of the Risk Regulation Reflex

An example will help make this RRR mechanism more concrete. In Spring 2002, two lift accidents made the news in France, a young boy dying in the first, and a woman left paralysed in the second. This last accident, which unleashed the “reflex”, took place in the city of which the Minister for Housing and Transportation was mayor. He immediately pledged to take “very severe measures, sometimes costly, but indispensable, considering the gravity and consequences of failures and certain technical problems”. A year later (July 2003) was adopted a new Law on lifts safety, which was complemented in September 2004 by implementation decrees setting a timeline for putting in full conformity all existing lifts. The new regulatory requirements cover nine safety areas. Lifts installed after 2000 are also covered but no mandatory improvements imposed, as they are assumed to comply with new requirements entering into force from that date. Interestingly, the timeline for improvements ran (for the most demanding ones) until 2018 (and has since been pushed back 3 more years), suggesting that regulators knew from the onset how difficult it would be to comply. The Elevator Service Association (whose oligopolistic members have gained considerably from this new regulation, and thus has an interest in overstating, if anything, the benefits from these improvements) itself claims that improvements have divided the number of serious incidents by five – but the baseline was of only 7 such incidents per year, with possibly 1-2 fatal. Thus, the new regulation is possibly avoiding 3-4 serious injuries and maybe one death per year, out of a 65 million population – using the highest possible estimates, provided by a highly interested party. The costs of putting existing elevators into compliance reached 5 Bln EUR in 2013, and are expected to reach at least 8 Bln EUR by the time all works are completed. It is not difficult to see how these resources could have been put to uses that would have had a considerably higher impact – hard also not to see how these regulations primarily benefit a handful of elevator service companies. They were adopted, however, with “the best of intentions”, all based on one politician’s pledge in the immediate aftermath of a local accident.

### D. Are we in a “risk averse” society – and, if so, can we do something about it?

#### i. Warnings about a rise in risk aversion and its regulatory consequences

In 2005 already, Tony Blair, then Prime Minister of the United Kingdom, issued the following warning: “In my view, we are in danger of having a wholly disproportionate attitude to the risks we should expect to see as a normal part of life. This is putting pressure on policy making [and] regulatory bodies (...) to act to eliminate risk in a way that is out of all proportion to the potential damage. The result is a plethora of rules, guidelines, responses to ‘scandals’ of one nature or another that ends up having utterly perverse consequences<sup>2</sup>.” This same speech was quoted in *Rethinking Regulation*, a report published in January 2006 in Australia and summarizing the work of the “Taskforce on Reducing Regulatory Burdens on Business” (Banks 2006). This report opened with remarks on the growth of regulation, which covered Australia but could have been about many other countries: “Australia has experienced a dramatic rise in the volume and reach of regulation, in response to a variety of social, environmental and economic issues”. It then moved on to discuss the possible causes of this regulatory inflation: “It is important to recognise the

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<sup>2</sup> ‘Common Sense Culture, Not Compensation Culture’, Speech to the Institute of Public Policy Research, London, May 2005 - <http://www.theguardian.com/politics/2005/may/26/speeches.media>

forces behind the growth in regulation if sustainable solutions are to be found. Perhaps the most fundamental of these is the changing needs and expectations of society itself. Some of this is a natural and desirable consequence of rising affluence and increased scientific knowledge. However, in the Taskforce's view, a more problematic influence has been increasing 'risk aversion' in many spheres of life. Regulation has come to be seen as a panacea for many of society's ills and as a means of protecting people from inherent risks of daily life. Any adverse event (...) is laid at government's door for a regulatory fix. The pressure on government to 'do something' is heightened by intense, if short-lived, media attention."

Both Tony Blair and the Banks report thus give a "classical" summary of the "risk regulation reflex": excessive reaction to adverse events, excessive demands for absolute safety and protection, resulting in regulations that go far beyond the needed and the reasonable. While the Banks report focused on regulations affecting businesses (and particularly small businesses, reminding that "regulatory burdens fall disproportionately on the economy's many small (including 'micro') businesses, which lack the resources to deal with them"), Tony Blair expounded also on the impact of such risk-averse regulations on "daily life": "something is seriously awry when teachers feel unable to take children on school trips, for fear of being sued" – and further in the same speech: "for example, one piece of research into a supposed link between autism and the MMR single jab, starts a scare that, despite the vast weight of evidence to the contrary, makes people believe a method of vaccination used the world over is unsafe. The result is an increase in risk to our children's health under the very guise of limiting that risk". Indeed, the MMR vaccination scare is a perfect example of "scare" leading to adverse health effects. Problems with what used to be routine school activities (school trips, or bringing home-baked cakes) have also been reported (and felt sorely) in many European countries – though they do not always originate in new regulations, but sometimes in increased litigation and enforcement of liability originating from quite "old" regulations.

## **ii. Do we have proof that risk aversion and (risk-averse) regulation are on the rise?**

Critics have pointed out (Carroll 2006) that the Banks report was making important claims, but did not always have data to back them up. Showing that the volume of laws and regulations has increased may only reflect the calls for higher quality of rules and increased quality, and the estimates of administrative burden are (by the Banks report own admission) difficult to make and highly variable. Furthermore, again as per the Banks report itself: "While a number of studies have sought to estimate the economic costs of regulation in Australia, the limitations of such studies mean that the estimates should be treated with caution (...). Further, none of the studies measure the extent to which the compliance costs exceed what is necessary to achieve the policy goals underlying the regulations, which is the focus of this review. Quantifying this unnecessary element is even more difficult, and clearly". Indeed, it is difficult to convincingly prove (or disprove) that the regulatory burden has increased, and/or that regulation is ever more intrusive and covering areas of life that used to be freer, *and* doing so in ways that add little or no discernable safety or other benefit. It could conceivably be done by thorough analysis of changes in regulations, benchmarking across countries etc. – but it would require a significant research undertaking, and resources.

It is our view that this shortcoming is not a major problem in view of this report. First, because "anecdotal" evidence of "regulatory creep" and "risk aversion" in regard with "daily life" activities

is quite substantial, and the growing discontent it generates in a number of countries sufficient cause to think about how to alleviate it. Second, because there is also considerable evidence, through benchmarking in specific regulatory areas, that some countries within the EU, i.e. with many of the same fundamental parameters and many harmonized regulations, impose far more burdensome regulations and regulatory procedures (licensing, permitting, inspections etc.) than others – without additional safety to show for it in many cases<sup>3</sup>. Finally, because in any case, regardless of overall trends in risk aversion or regulation, ensuring that the best possible policy decisions are taken in terms of effectiveness and efficiency is of public benefit.

In this perspective, rather than focusing the discussion on whether there is convincing proof of an increase in regulatory burden (which is debatable, particularly if we are talking about *net* burden, i.e. “burden less benefits”), or an increase in risk aversion in the society (with some clear examples in some areas, but also important counter-examples), the focus should be on what situations, contexts and systems produce bad decisions – and which ones can, on the contrary, foster good ones. To quote the authors of *The Government of Risk*: “macroscopic and world-historical perspectives on risk and its management may have their uses. But most of them do not explain, or even describe, variety *within* the putative ‘regulatory state’, ‘risk society’ or ‘audit society’. Yet casual observation, academic inquiry, and official surveys alike indicate substantial variety in the way risks and hazards are handled by the state” (Hood, Rothstein, Baldwin 2001). This is indeed the line of inquiry that inspires this report: how to identify causes in differences of reaction to risk, and possibly to define ways to help get as much as possible evidence-based, effective and efficient decisions in reaction to accidents, hazards and risks.

### iii. The question of “trade-offs” – can all objectives be reached at once, or do we have to accept the need for choices?

Individuals, societies, governments, international or “supra-national” organizations, all have sets of goals and objectives that coexist but may in some cases (or even frequently) come in conflict. Many would argue that the quest for more material well-being (observed both at individual and social level, and backed up by policies supporting economic development and the private sector) can conflict with another objective of both individuals, societies and public bodies, the protection of health and more broadly the environment. Certainly, it is not always the case that these goals conflict, as for instance the whole “green growth” idea (and realities) show. But there definitely are instances when objectives (and the values underpinning them) conflict.

#### a. An example of trade-off – economic growth and environmental health

A very good example of this, and of its possible consequences in terms of regulation, is presented by Ragnar Löfstedt in his article on the ‘Swing of the Regulator Pendulum’ (Löfstedt 2004): “the issue of both improving and implementing regulations are closely linked to the three main drivers

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<sup>3</sup> An important clarification is in order here: in *some* cases, countries impose higher regulatory requirements than is the case elsewhere in the EU *and* have a clear difference in results to show for it (e.g. several nordic countries in environmental matters). In such case, it becomes a question of cost-benefit analysis and of prioritization in values and objectives whether to opt for such stronger regulations or not. In other cases, countries impose considerable burden often through numerous permits, approvals etc., or additional regulatory norms (like the lift safety example we used above), with very little or no positive impact at all. This latter case is the one we are referring to here.

of EU regulatory concerns: competitiveness, good governance and sustainable development. For example, if regulations are not improved, not only will European competitiveness be adversely affected, but also the criteria for good governance will not be met. Similarly, if environmental and health regulations are not properly implemented how can the EU state that it is taking sustainable development seriously?" He goes on to indicate that "the three drivers (competitiveness, sustainable development and governance) are, according to the Commission, closely interrelated and compatible. The Commission has long held the view that there is no actual conflict between environmental protection and competitiveness. It stated in the 1993 5th Environmental Action programme that: *The perceived conflict between environmental protection and economic competitiveness stems from a narrow view of the sources of prosperity and static view of competition.*" While not commenting on this optimistic view held by the Commission, Löfstedt further exposes the tensions between the "precautionary" and "impact assessment" philosophies, and suggests that, in attempting to build credibility by showing "fairness" through "tough" decisions against business interests, the EU regulatory bodies have probably overshot their target and that the pendulum is likely to start swinging back towards "risk assessment" rather than "harm prevention".

What does this example show us? First, it implicitly suggests that there are, indeed, trade offs – at least, in the author's perspective, between legitimacy of public authorities and economic growth. But we would argue that the cases presented in the article actually show that there is a tension between environmental and health protection and, if not economic growth overall (on which it is more difficult to comment because of the complexity of the effects involved), at least the availability of cheap products on the market, and possibly short-term job creation. One of the examples used by Löfstedt is the ban on virginiamycin in animal feed, and the use of the precautionary principle by the European Court of First Instance in its 2002 ruling against Pfizer. Since the article states that "there was no reputable scientific evidence that there was a transfer of antibiotic resistance to humans as a result of the use of the antibiotic in animal feed" and further suggests that the decision was excessive (and an example of steps that may in the end trigger a "swing of the pendulum" in the other direction), it is worth looking (of course with the benefit of hindsight) at how well this decision has stood the test of time in terms of science and risk assessment. In its latest guidances for industry on the subject of use of antibiotics in animal feed<sup>4</sup>, the United States Food and Drugs Administration (FDA) emphasizes the need "to help phase out the use of medically important antimicrobials in food animals for production purposes<sup>5</sup>". In 2013, the US Center for Disease Control (CDC) stated in its *Antibiotic Resistance Threats in the United States* report: "Antibiotics are widely used in food-producing animals (...) This use contributes to the emergence of antibiotic-resistant bacteria in food-producing animals [which] are of particular concern because these animals serve as carriers. Resistant bacteria can contaminate the foods that come from those animals, and people who consume these foods can develop antibiotic-resistant infections. (...) Scientists around the world have provided strong evidence that antibiotic use in food-producing animals can harm public health (...) Because of the link between antibiotic use in

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<sup>4</sup> Guidances #209 issued April 13, 2012 - #213 issued December 2013 – both referencing guidance #152 issued October 23, 2003 – see <http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM299624.pdf> and <http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM216936.pdf>

<sup>5</sup> "FDA's Strategy on Antimicrobial Resistance - Questions and Answers" <http://www.fda.gov/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/ucm216939.htm> - see also <http://www.fda.gov/AnimalVeterinary/SafetyHealth/AntimicrobialResistance/JudiciousUseofAntimicrobials/default.htm>

food-producing animals and the occurrence of antibiotic-resistant infections in humans, antibiotics should be used in food-producing animals only under veterinary oversight and only to manage and treat infectious diseases, not to promote growth.”

We have quoted on purpose from US rather than EU agencies, because most authors (see e.g. Löfstedt 2004, Wiener 2003) would agree that they have been (at least in recent decades) rather *less* precautionary, and because (partly as a consequence of this regulatory stance and partly as a result of different economic structures) antibiotic use in animal feed is considerably more widespread in the US than in the EU. The fact that the FDA guidances are voluntary (a clear result of the need to balance safety issues and economic interests, and of the difficulty to overcome industry resistance) cannot obscure the fact that both the FDA and CDC are highly concerned and are trying hard to eliminate the routine use of antibiotics in animal feed, particularly when there is no disease being controlled and antibiotics just function as growth aid. In April 2014, the FDA released a list of “voluntary withdrawal” including 16 Antimicrobials for use in food-producing animals<sup>6</sup> – it included virginiamycin, the drug at issue in the *Pfizer* 2002 case. It seems that the Court’s “precaution” was not so mistaken and groundless after all.

This shows the importance of caution when considering risks where significant uncertainty exists and knowledge is still under development. While designing adequately proportionate decisions in cases of well-known and understood risks is in general possible, there is a strong case to be made for a combination of “precaution” and “proportionality” when dealing with uncertainty. This may occasionally result in decisions that hindsight shows to have been excessive, but also in a number of other cases may result in avoiding very significant damage or disasters (see European Environment Agency 2001 for numerous examples). When considering the long-run, this is very important because a track record of discounting risks when uncertainty is significant, and of subsequent damages where it had been claimed that there was none to be feared, results in undermining the credibility and legitimacy of public authorities and their scientific advisors – and thus in laying the ground for support for RRR-based decisions in the future. It is not just a question of costs and benefits in terms of life and health, and economic and social impact, but of the “snowball” effect that credibility loss will have.

#### ***b. Understanding and accepting trade-offs***

A far better path towards understanding the “risk regulation reflex” problem and laying out potential solutions seems to us to be sketched out in the contribution of Cary Coglianese and Christopher Carrigan to the collective volume *Regulatory Breakdown*. Quoting them: “Is it possible that the ultimate failure of the U.S. regulatory system is that the American public, through its elected representatives, asks regulators to oversee activities that are at once desired but also deadly?” (Carrigan, Coglianese 2012). In other words, there *are* trade-offs: to a certain extent, different goals may be compatible, but at some point, they may conflict with each other, and choices (conscious or unconscious, open or hidden) will have to take place.

As Carrigan and Coglianese point out, denying these trade offs may well be one of the key reasons behind the RRR – as “insufficient” or “failing” regulation becomes an ideal scapegoat when something goes wrong. Quoting them (*ibid.*): “Calamities, we suggest, bring with them strong

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<sup>6</sup> <http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm392461.htm>

tendencies for faulty assessments of both underlying causes and necessary reforms. These tendencies are due to a host of factors, including both psychological biases as well as nuances in the policy process itself. The pressure politicians feel to adopt change even without solid policy analysis (...) means that solutions can end up being adopted that are either unrelated to the true cause of disasters or that actually work at cross-purposes to improving conditions. In addition, sometimes the underlying problem may not have to do with the (...) operations of the regulator or the regulated industry but may instead reflect inherent societal choices about trade-offs.”

Disasters easily lend themselves to faulty assessments, based on heuristics that humans have developed to survive in their natural environment hundreds of thousands years ago, but are increasingly inappropriate to understanding situations in a technologically advanced environment and highly complex societies (Benneer 2014 and Carrigan, Coglianesi 2012). Again quoting from the latter: “psychological and behavioral economics research (...) support the notion that people tend to focus more on worst-case outcomes and to believe that vivid events are more common than they really are (Tversky and Kahneman 1973). Moreover, researchers studying these phenomena— known as the “availability heuristic,” along with other cognitive biases— also report that they can be exacerbated by the media, which for obvious reasons tend to focus on especially dramatic events (Shrum 2002).” In such situations, regulators and regulations provide ideal points of fixation for negative emotions. The “culprits” in the narrow sense may be the business operators or individuals who were directly involved in the disaster, but regulators often end up receiving nearly as much blame. They form ideal “scapegoats” to blame for something that went wrong – regardless of whether this was in fact at all possible to predict, whether there were any structural elements or not.

If indeed the issue is fundamentally linked to the refusal to confront contradictions inherent to multiple goals, and to accept trade-offs, then “scapegoating” regulators and calling for stronger rules and enforcement is a way to continue this refusal. It is convenient for politicians, who avoid confronting their own failures (see for instance the case of the *Deepwater Horizon* in Carrigan 2013), and for citizens, who do not have to make hard choices (at least not consciously). Addressing the RRR thus appears possible – though not easy – and would start by making tensions and contradictions between different goals and aspirations clear and visible. From this, a rational conversation could be had regarding the potential trade-offs, the possible ways to reconcile conflicting goals to some extent, and the limits of this. On this basis, rational policy decisions can then be taken, with a clear view of what upsides and downsides they entail.

### **E. Disasters have led in the past to many useful regulations and policy responses – what may have changed?**

One may wonder why reacting to a disaster would necessarily lead to the wrong response. Since the Middle Ages at least, if not earlier, regulations (and institutions) have come into existence in response to risks, real or perceived, and often in the immediate aftermath of disasters of some kind (be it a sudden event or a prolonged situation). This has been particularly true of the growing system of regulations and regulatory implementation structures that has developed over the past two centuries – covering occupational safety and health and labour rights, environmental protection, food safety etc.

### a. A short overview of sound regulations following disasters

In the UK, the 1833 Factories Act led to the creation of HM Factory Inspectorate in the same year, and the 1842 Mines Act to the creation of the Mines Inspectorate in 1843 (with increased powers from 1850). In both cases, this came in reaction to public opinion being shocked about working conditions in factories and mines (particularly for children and women). In the United States and much of Europe, as in the UK, mining accidents led to safety regulations being adopted, and often inspecting institutions set up, in the 19<sup>th</sup> century. The same goes for instance for the US Food and Drugs Administration, created in 1906 following scandals about adulterated or otherwise hazardous foods and drugs<sup>7</sup>. Tragedies caused by drugs touted as “safe” (e.g. Thalidomide) led to increasingly stringent prior approval regimes for medicines in the 20<sup>th</sup> century (and further scandals, such as the *Mediator* one in France, have led to further changes in these systems). Mid-20<sup>th</sup> century “killer fogs” in London led to pollution controls. The Seveso disaster gave its name to an EU directive (and its successive iterations), and other chemical disasters such as Bhopal in India, Love Canal in the US etc. all led to strengthened regulations and oversight<sup>8</sup>.

### b. The “flattening of the improvement curve” – and other factors

Even though critics of government regulations would argue that current occupational safety or food regulations impose too much burden on economic initiative, the part of these regulations that dates back to a century or more ago is widely accepted as having delivered considerable benefits at what appears to have been a very limited cost to economic growth, innovation etc. What, then, has changed so that nowadays dramatic events tend to lead far too often to regulatory responses whose costs vastly outweigh the benefits they may bring (or even sometimes bring only negatives)? What is it that makes for a “risk regulation reflex” with overwhelmingly negative outcomes? The first one is certainly the increasing marginal cost of averting accidents and other hazards: the higher the existing safety level, the higher the cost of additional improvements in safety. As Helsloot and Schmidt (2012) put it: “every improvement curve flattens out at a certain point. Consequently, anyone who wants to achieve anything in the ‘tail’ of the curve needs to be very cautious about making substantial investments, as [their costs] can easily be disproportionate [to their benefits]”.

This “flattening of the improvement curve” is a feature that is very difficult or impossible to affect – and thus there is an inherent character, to some extent, in the fact that further improvements in safety and health will, more or less inevitably, have greater costs than the ones that came from earlier “low hanging fruits”. There are, however, a number of other factors that lead to an excessively costly and poorly thought-through RRR, and they are often understood to be:

- Lower risk-tolerance, meaning that we tend to address issues that in earlier times would have been accepted as the normal state of things
- Difficulty for scientific evidence to overcome ideological preconceptions, pseudo-science, and fundamental psychological patterns with regard to risk
- “Positioning” of political and other actors (media, interest groups) in a world where information flows extremely quickly and where what used to be small, local news items

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<sup>7</sup> <http://www.fda.gov/AboutFDA/WhatWeDo/History/CentennialofFDA/default.htm>UK

<sup>8</sup> See e.g. Balleisen, Benneer, Wiener (2015) as well as IRGC Conference presentations by the same authors

swiftly become national or global. This leads to over-reaction, and to decisions being taken too quickly and without proper analysis, insufficient attention to regulatory design etc.

*c. “Unpacking” the factors behind the RRR mechanism – psychology, trust, policy actors*

We would argue that all three points are important, and indeed there are factors pertaining to risk-tolerance and risk-aversion (and their psychological underpinnings), to the trust or lack thereof in scientific advice and in policymakers statements, and to policy actors – but the characterisation above leads to many misunderstandings of what really happens in the RRR, and how to avoid it.

Psychological aspects of the risk response

First, psychological aspects are important, and indeed human heuristics are poorly suited to dealing with uncertainty, statistical aspects of risk etc. – but research and experience show that, when engaging properly with the public, it is possible to discuss risk in a rational way and to ensure that risk perception does not necessarily degenerate into risk aversion, but rather that risk acceptance can be fostered. Indeed, while risk perception is essential in determining each member of the public’s initial response to a risk or incident (see e.g. Slovic, Fischhoff, Lichtenstein 1982), what matters in the end is whether the initial perception is “frozen” or not.

Repeated research (see Helsloot, Schmidt 2012) has shown that, while simple questions asked without any background or any additional information tend to produce responses where people manifest strong risk aversion, this can change when additional information and context are provided. Indeed, people do not respond to risk only from a “more” or “less” risk perspective – but integrate a number of other values (fairness, equality, liberty, self-reliance etc.) (see Eeten, Boudier 2012<sup>9</sup>). Research suggests that “people seem to be able to make a difference between their own risk perception and what risks should be accepted reasoning from an administrator’s point of view” – when given sufficient information on costs and benefits, they will balance the advantages of addressing a specific risk with its downsides and with other alternative uses of resources, whereas if only asked whether a given risk is important and worth addressing, they will usually answer “yes”<sup>10</sup>.

The conclusion here seems to be that the public may well be far smarter than usually given credit for – engaging members of the public takes time and resources, but can yield a far more balanced and rational approach to risk than relying on rushed “yes/no” questions with no context and information.

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<sup>9</sup> For an excellent overview of the different values that can underpin radically different approaches to risk and trade-offs in the criminal justice field see Buruma 2004.

<sup>10</sup> In one of the experiments presented by Helsloot and Schmidt (2012), 35% of respondents essentially change their mind within the course of one single interview, when moving from simple dual questions to a more considered discussion and asked to put themselves “in the shoe” of a policy maker.

### Science, transparency, trust

Second, as we have attempted to show above, the public's relationship with science is also more complex than many experts would suggest, who mostly see the public as insufficiently listening to science and not able to properly distinguish "real" from "pseudo" science. Most of these conclusions lead their authors to recommend that efforts be made to ensure that the public defers more to scientific advice, but in ways that seem more like "communication" and "propaganda" than real engagement.

There is certainly a share of the public who will not accept scientific findings and rather adhere to other views – be they based on religion, ideology, conspiracy theories or any other worldview. When a significant share of the population holds such views, it is important to acknowledge them in the public discussion, including indicating that the policy decision will *not* be based on them, but on scientific findings and utility maximization<sup>11</sup>. What matters more to us here is that, for those members of the public (typically, the majority) that do *not* hold deeply views that are fundamentally at odds with a scientific perspective, trust in scientific advice (and in policies that claim to be based on it) can be built up – and can be destroyed as well.

Dissimulation or manipulation of evidence, claims of full innocuity for things that later are proven to have been extremely hazardous (or the opposite: claims that something is very dangerous whereas further evidence demonstrates it to be less so), can severely damage the public's trust in science – or at least in official claims for policies to be based on "science".

### Policy actors – the risk aversion cycle, and the problem of "risk experts"

Finally, the question of policy actors is important, and has at least two aspects – one being the way all actors in the RRR are linked through a kind of cycle, the other being the activities and impact of "policy entrepreneurs".

The circular aspect is the way, in a RRR process, all actors in a way attribute responsibility for decisions and actions to someone else: the media claims that the public is outraged and demands action, politicians say they have to act because the issue is all over the media – and civil servants claim they are compelled to act by politicians and the media. As for the public, it faces a barrage of media coverage, and politicians all promising that "it should never happen again", and feels reinforced in all feelings of risk aversion. This relationship has been called "Februari's Circle" (van Tol 2014) after Maxim Februari, who exposed it as part of the work done for the Risk and Responsibility programme (BZK 2011). The crucial element of this circle is that no one is taking responsibility – and everyone claims to be doing their job. The media say they have a responsibility to voice public concerns (and an interest in "crisis", which sells well). Politicians say they have to respond to their constituents' demands (and an interest in winning, not losing, elections). Civil servants say they have a duty to follow priorities laid out by elected politicians (and an interest in keeping their jobs). In all this, interest is more evident than duty – and the attitude of members of the public is typical of the "Not In My Backyard" (NIMBY) pattern (Helsloot, Schmidt 2012).

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<sup>11</sup> Discarding them without even a proper mention, by contrast, decreases legitimacy by making the process "unfair" from a procedural justice perspective, as dissenting views are not even given a "voice" (regardless of the final policy outcome).

As we have indicated above, this circle is not a fatality: breaking may be possible, by providing the public with more information and context, and initiating a real public conversation about the risk at hand. This requires, however, initiative from at least one group of actors. Primary responsibility lays in our views with elected politicians, and with their close advisors including senior civil servants. This is not easy – as Carrigan and Coglianese (2012) put it: “Intense reactions by the public (...) drive an intense desire by politicians to take action. Under such circumstances, taking any action targeted at the regulatory process, regardless of how well or poorly crafted, will be better politically than taking no action at all. Political incentives point in the direction of quick legislative action that responds to calamities. Voters focus much less on considerations of how a law will be implemented than on the enactment of a new law itself (Mayhew 1974; Mazmanian and Sabatier 1983). Legislators can reap rewards from passing legislation regardless of whether doing so turns out to be realistic or effectual”. However, we have seen that research also shows that engagement with the public can yield real changes – thus, if the “circle” can be interrupted, the pressure to act regardless of effectiveness will stop. This report aims at presenting ways in which space for such a “rational conversation” can be created.

In addition to actors in the “circle” seeking to push responsibility on others, there are some specific actors who *actively* seek to strengthen the RRR, who have an active interest in reinforcing the reflex, in making the particular risk appear as particularly serious so as to maximize the response. What many authors call “policy entrepreneurs” can be of many kinds, and have been studied from a variety of angles (see e.g. Roberts, King 1991 – Mintrom, Norman 2009 – Cohen 2011). The importance of “policy entrepreneurs” as one of the elements shaping response to risk has been pointed out by Hood, Rothstein and Baldwin (2001), and the presence and activity of these “entrepreneurs” is for them one of the elements that can lead to different “risk regulation regimes”. From the perspective of the RRR, which represents a specific case of “risk regulation regime” (one with particularly strong response compared to what could be expected from a rational analysis of the “market failure” – see again Hood, Rothstein, Baldwin 2001 for a broader typology), a feature seems to be that there are “policy entrepreneurs” particularly successful at pushing for such a response. These “policy entrepreneurs” were generally already pushing for their favourite policy, and the incident gives them an opening: “Crises provide opportunities for policy entrepreneurs to place at center stage those solutions they have already been seeking to see adopted (Kingdon 1984:91). Even if those solutions were not developed to address the particular problem at hand, politicians often feel compelled to consider them— to “do something” (Carrigan, Coglianese 2012).

They can belong to different categories – private businesses in some cases (e.g. suppliers of equipment or services to address the particular risk considered, e.g. lifts retrofitting as in the French example presented above), NGOs in others (e.g. those focusing on environmental protection, or some trade unions etc.), but also “experts” (independent or affiliated with consulting firms, research institutions, NGOs, businesses etc.) – and they are also quite often *inside* public administration (and in such cases, pushing for more regulation in their sphere of competence is a way of entrenching their importance, and their budgets – see Helsloot, Schmidt 2012).

Not all such “policy activism” is motivated by self-interest, far from it – “risk experts tend to really believe, and policy makers are made to believe, that an incident is proof that regulation should be tightened” (Helsloot, Schmidt 2012). The difficulty for civil servants and elected officials alike (and for journalists) is to decide whether these “risk experts” are right – to screen their proposals, or to

review existing rules adopted in a previous “RRR moment”. Indeed, “knowledge is required in order to determine what rules are disproportionate and can therefore be repealed. This knowledge is usually only available to the risk professionals of policy departments and their external advisors” (*ibid.*).

Thus, again, an essential step in order to avoid RRR-based decisions is to provide time and space for careful consideration of arguments and evidence, rather than relying immediately on whichever “solutions” are advocated by “experts” which, even in the absence of material interests, will have a personal investment in their own field of study and expertise.

## F. Opening spaces to escape from the RRR

### i. Regulatory governance and mindsets

Principles and mechanisms of better regulation developed and introduced over the past twenty years have been emphasizing the importance of cost-benefit analysis, to avoid adopting new regulations that bring more harm than good. In the regulatory delivery sphere, similarly, good practices have been defined and principles adopted to ensure that enforcement, inspections and other activities are efficient, proportionate, effective, and not counter-productive (OECD 1995, 2005, 2014 and APEC-OECD 2005). In practice, however, it appears that these regulatory governance mechanisms often get side-lined, and principles disregarded, when politicians consider an issue as a priority, and have decided on a particular response – and publicly committed to it (see e.g. Productivity Commission 2012). This means that, in order to avoid the negative effects of hasty, insufficiently considered decisions leading to inadequate policy decisions (regulations, resource allocation, enforcement guidelines etc.), action must be taken on the factors that enable them: understanding of risk and its prevention or mitigation, risk-tolerance, and the political and “public opinion” context.

Affecting the level of risk-tolerance in the society may seem like a particularly tall order. Repeated studies (see Helsloot, Schmidt 2012) have however shown that the *potential* level of risk-tolerance of the public may in fact be higher than what policy makers and other public actors (e.g. the media) think, but that *expressed* risk-tolerance (or lack thereof) strongly depends on how the topic and question are framed. This means that the level of risk-tolerance is in fact linked (in practice) to how accidents, dramatic events etc. are presented and reacted to in the public sphere. This shows the importance of having openness and clarity on what the trade-offs are in public policy, what would be the cost of regulating or preventing a given risk, what would be the alternatives etc. It also requires that the public have at least a modicum of trust in what public officials tell them. Dissimulation and false assurances are sure way to squander this trust.

### ii. “Modelling” RRR processes

Another, more detailed way to look at these factors of “reflex” reactions and their consequences is the model proposed by Wiener and Balleisen (with additional contributions from Weber and Benneer) at the International Risk Governance Council annual conference held jointly with the OECD in Paris in 2014 (IRGC Conference 2014). In this model, crisis events can lead to small or

large changes in risk perceptions, and the latter again to major or minor shifts in policy agenda. The magnitude of changes depends to a large extent on how the crisis fits or contrasts with baseline risk assumptions, and how the perception of the crisis is mediated by ideologies, heuristic models, narratives (“master-stories”) etc. The interplay of interest groups’ agendas, resources available, trust or distrust in specific institutions or actors, etc. then again influences whether the changes are substantial or mostly “cosmetic”. Weber (*ibid.*) adds a psychological dimension to the analysis: for instance, humans tend to underweight the actual risk of events that are common and that they perceive as “normal”, and to overweight the risk of events that have a very low probability but that they have previously experienced. There are many psychological mechanisms which mean that perception of risks by non-experts (be they politicians, journalists, citizens) can differ widely from what data shows the actual risk level to be. This is of course one of the primary reasons why over- (or under-) reaction to accidents and crises can occur.

In terms of sequence of events and reactions, this model sees events as being first mediated through baseline risk assumptions, and then modulated by a series of filters (ideologies, “master-stories”, heuristics, media) in order to produce a “causal narrative” of the crisis. Depending on the different aspects of the context, this may result in blaming culprits or scapegoats, looking at structural issues, “policy regret” or bias confirmation. The causal narrative may be agreed upon, or disputed. Then, the causal narrative or narratives themselves get complemented by expert analysis (or analyses) and the whole agenda or “policy menu” gets itself filtered by interests at play, resources available, institutional structures and the level of trust (or distrust) in institutions), to result in policy decisions. Depending again on the whole set of events and context, these may be “cosmetic” or “substantial” changes.

In a more formalized way, this model emphasizes the same factors as the “risk regulatory regime” approach of Hood, Rothstein and Baldwin (2001) or the key elements of the RRR evidenced by van Tol (2012) and Helsloot and Schmidt (2012): the importance of a context where values and visions of the public and the different actors shape how they perceive and react to risk, the impact of the intervention of experts and other actors to shape events into a “causal narrative” and a policy agenda, etc. It adds to this the importance of institutional capacity (or lack thereof) in steering the final policy decisions – Helsloot and Schmidt (2012) present, however, several examples of how the RRR can lead to policy decisions in favour of new regulations even in the absence of capacity to implement them (in several of these cases, the new regulations later end up being abolished, because they have not been seriously implemented).

All these analyses and models concur in highlighting the importance of *perceptions* and *shaping* of the issues, and also of what interests are at play, and what context the crisis occurs in. The key about the “reflex” mechanisms is the tendency to react *too fast* to the event – without giving sufficient time for inquiry and analysis. Against this, Benneer (IRGC Conference 2014) suggests that the answer should be “deflect” (take visible but inconsequential actions showing political attention but not locking-in potentially harmful decisions – thus giving time for further consideration) or “reflect”. The key seems to be to create a shared understanding of this need to defer meaningful action until the situation has been more fully understood, to create the “conditions of possibility” for this time and “breathing space”. How to do this is one of the main questions this report aims at giving some answers to.

### iii. From “Risk Assessment” to “Concern Assessment”

One of the suggested ways to successfully address the RRR is for experts and civil servants to not only focus on “risk assessment” (where the risk level is assessed based on science and probabilities), but also on “concern assessment” (looking at the psychological and social reaction to risk, as well as the potential economic and social consequences). This is an important element of the risk governance framework promoted by the IRGC and further elaborated upon among others by Ortwin Renn (in Boudier, Slavina, Löfstedt ed. 2007) – in the risk appraisal stage. Ensuring that civil servants and policymakers, as well possibly as “opinion leaders” more broadly, understand the importance of these two elements, could help ensure that the way they react to adverse events gives space for proper reflection. Addressing “concern” can be seen as corresponding to the “deflect” approach suggested by Lori Benneer (IRGC Conference 2014): make gestures that show that the political authorities *care* about the topic, but without committing to unrealistic goals (“it should never happen”), nor (even less) to a specific and binding course of action. Achieving this, however, is easier said than done.

The risk is that policymakers and officials see this as one more “communication technology” and “concerns” as purely irrational. “Concern assessment” needs to be done genuinely, and the answers need to be likewise honest – evidence of manipulation and deceit will otherwise massively damage trust from the public and lead to demand for over-reaction in the future, because policymakers and public administration will not be trusted and their reassurances will likewise be doubted. It is also important that concerns of different kind be seriously considered and discussed in their own terms – not simply by repeating “risk is minimal”. As van Tol (2012) as well as Helsloot and Schmidt (2012) have shown, the more emphasis is put on risk being “low”, the more the public receives the message that “lowest possible risk” is what should be desired. Squarely discussing other aspects of the crisis (fairness, compensation, mitigation, responsibility, freedom, uncertainty etc.) allows to discuss the concerns in their whole complexity, and to move the discussion away from a narrow “more risk/less risk” duality.

### iv. The appropriate role of science

It thus appears that, in order to improve the way adverse events are responded to and avoid the Strengthening the role of scientific analysis and evidence has been much touted as a way to have more risk-proportionate and less risk-averse regulation, to avoid or mitigate RRR-type over-reactions and generally to build “better regulation”. Many governments, as well as the European Commission, have tried for years to strengthen scientific advisory bodies and give them more independence and influence (or at least implemented reforms and policies that they claimed were aimed at these ends). It is worth briefly discussing here the complexity of the topic.

First, there is no absolute guarantee that scientists will always opine in favour of “risk-tolerant” policies – as Helsloot and Schmidt rightly emphasize, “experts” often will promote the (unique) importance of “their” risk, and scientists are experts too. Having bodies made up of representatives from a variety of scientific fields is supposed to mitigate this pitfall.

Second, many voices have also criticized as a dangerous illusion the idea that political decision making could be entirely or mostly displaced by scientifically-based expertise. Scientific advice is meant to provide elements for consideration in the public discussion. A number of other aspects (in particular: moral and political values) need to be taken into consideration as well.

Third, as we have attempted to show above, scientific advice is complex, particularly when faced with uncertainty. There is a temptation to “push” this advice towards “lighter regulation” or “growth friendliness” in all cases, but this may lead not only to severe consequences if the uncertainty turns out to have “hidden” a very serious risk – it will also inevitably dramatically damage the public trust in scientific advisors, and in politicians and officials.

Where there is uncertainty, only openness about it and about the trade-offs inherent to a decision based on uncertain knowledge can mitigate this, and avoid distrust to build up. When evidence is conflicting, it should be presented as such. When evidence exists, and runs contrary to existing or proposed public policy, it should also be presented as such – again, the final decision does not *have to* strictly follow science, it can also be based on other considerations, values etc. Thus, what distrust of “official science” exists in many parts of society may not in fact be a refusal to heed real scientific views, but a distrust of the way this “official science” is often manipulated, with evidence selectively presented or manipulated. Addressing this requires real commitment to independence of scientific advice, to transparency, and to using science in *all* public policy domains, and not just some of them.

Finally, existing examples have major limitations, for instance their scope (many major fields, such as criminal law and justice, have been entirely exempt from such scientific oversight), but also the level to which their conclusions are accepted as neutral and authoritative.

It remains, nonetheless, that bringing more scientific thinking and evidence into the decision making process is a key element to break away from RRR situations. The right question may thus not be “are scientific advisers or bodies useful” – but rather what mandate to give them, what to expect from them, on which timeframe to judge their effectiveness, and how to handle uncertainty. Extending the practice to require scientific evidence and expertise to *more* fields of public policy could also be an important element of response to our problem.

#### **v. Creating the right conditions for “reflexion” rather than “reflex”**

It thus appears that, in order to improve the way adverse events are responded to and avoid the “risk regulation reflex”, what is needed is both to re-introduce a “time for reflexion” (and analysis) and to put the event in perspective. Thus, the event can be carefully considered, and conclusions be drawn as to whether there indeed is a systemic issue, whether addressing it would yield more benefits than costs, and how to do this in the most efficient way. If a new regulation is seen as the way forward, this can then be developed in compliance with better regulation principles and practices. What is at stake is to create the conditions of possibility for such careful consideration and better regulation mechanisms – and this has primarily to do with working on public perceptions, and with short-term behaviours of public actors (including, but not limited to, policy makers).

In this report, we will attempt to highlight a few examples from across the EU and OECD of both the “Risk Regulation Reflex” and its negative consequences, of situations where on the contrary such a “reflex” reaction has been avoided, and of structures and practices that seem to defuse the said “reflex”. From these cases, we will try and draw some conclusions that could serve as basis for a coherent and consistent approach to such situations.

### 3. Bad examples: poster children of the RRR

The following cases, chosen to illustrate “bad RRR examples”, share the same characteristics:

- Measures were adopted by decisions makers in response to an event – or a succession of events – regarded as serious, but which is in fact relatively rare or isolated, under the pressure of the public and the media or in other to acquire political trust.
- Measures were implemented without conducting a careful cost-benefits analysis.
- Measures lack empirically based risks analysis (reduced by the regulation and created by it).
- Most of the time, measures have been (partly) ineffective.

In these few examples, we have chosen to mostly cover cases outside of the sphere of economic and business regulation, for a few reasons. First, other sections of the report already include several illustrations taken from this field. Second, the whole emergence of the RRR concept and discussion initially took place in the context of reducing the regulatory burden for economic activities, and it was only gradually, in an incomplete manner, and with some resistance, that it was broadened to include all kinds of regulation – we found it important to highlight how frequent (and harmful) RRR cases were in non-economic fields. Finally, as we pointed out in the opening section of this report, RRR-type reactions tend to be underpinned by ideological predispositions on both the left and right sides of the political arena. Much of the “RRR-prevention” discussions have emphasized the impact on economic activity, growth, and employment, with a pro-business inclination. We found it would be useful to show the importance of the RRR (or, rather, its prevention) from a civil liberties perspective.

#### A. Criminal justice

##### i. Sex offenders’ registration and notification

Sexual offences are both a social and a public health issue. They imply significant costs, including human and financial costs to victims, social and health services costing, public expenditure in regulating felon’s behaviour and prosecuting and interning sex offenders. It has consequently become a crucial challenge for policy makers to adopt measures likely to protect communities from sexual offending while reducing public investment and preventing recidivism (Corabian et al. 2011).

Following a general trend in the United States in which the legislator changed how sex-offense cases were prosecuted, in 1994, states were required to track persons who had been convicted of sex offense (that is to say, ex-offenders released from custody) – by confirming their place of residence annually for ten years after their release into the community or quarterly for the rest of their lives if the sex offender was convicted of a violent sex crime<sup>12</sup>. Databases of sex offenders were created. In January 1996, as a response to the case of a 7-year-old who was violently raped

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<sup>12</sup> Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act, available at: <http://www.gpo.gov/fdsys/pkg/BILLS-103hr3355enr/pdf/BILLS-103hr3355enr.pdf>.

See also <http://ojp.gov/smart/legislation.htm>.

and assassinated in New Jersey by a neighbour who had two previous sex convictions, the federal Megan's Law<sup>13</sup> allowed states to make those registries public.

Successive laws (both state and federal laws) generally became more restrictive towards ex-sex offenders<sup>14</sup>. Among other measures, they moved the public registries online, created a national database on sex offenders and offenders against children and required lifetime registration of people 14 years old and up. The State of Missouri restricted certain activities of persons registered as sex offenders, for example on Halloween: this persons "are required to avoid all Halloween-related contact with children, remain inside his or her residence between 5 and 10:30 p.m. unless there is just cause to leave, post a sign stating, 'No candy or treats at this residence', and leave all outside residential lighting off during the evening hours<sup>15</sup>.

Even though studies have highlighted that risk assessment instruments consistently outperform the offense-based systems, the vast majority of US states use none of these tools when determining sex offenders' inclusion on the registry. Generally speaking, the offense-based classification adopted by the Adam Walsh Child Protection and Safety Act lacks of empirical validation; therefore, this classification "did a poor job of identifying high-risk offenders, and thus may not meaningfully guide sex offender management practices" (Zboga et al. 2012: 29<sup>16</sup>). On the contrary, existing tiers adopted by states according to empirically supported risk criteria seem to reduce successfully recidivism rates (Zboga et al. 2012).

Moreover, a study found that community notification discourages first-time sex offenders, but is likely to increase re-offense by registered offenders by increasing the relative fascination of criminal behaviour. Once again, the authors of the report regret the lack of empirical evidence on the benefits of registration and notification legislation, which "has not stopped politicians and policymakers from further regulation of sex offenders" (Prescott and Rockoff 2010: 29).

According to Hood et al. (2001), risk/risk adjustments are significant in the management of released sex offenders – such as paedophiles<sup>17</sup>. Measures taken by the public authorities to reduce the risk of committing a sex offence – such as public registration – are likely to increase the risk to ex-sex offenders from attacks by the general public and to endanger innocent people erroneously identified as felons. The risk to the child and the community can be identified a *natural hazard*, since it is no new phenomenon. The game-changing feature is its degree of detection and discussion by the public and the media. The politicians have turned it into their pet issue, even though the scale of risk is hard to evaluate (Hood et al. 2001: 41-42).

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<sup>13</sup> Available at: <http://www.gpo.gov/fdsys/pkg/BILLS-104hr2137enr/pdf/BILLS-104hr2137enr.pdf>.

<sup>14</sup> See in particular the Adam Walsh Child Protection and Safety Act of 2006, available at: <http://www.gpo.gov/fdsys/pkg/PLAW-109publ248/html/PLAW-109publ248.htm>. This Act, also called SORNA (Sex Offender Registration and Notification Act), which goal is to improve and standardize sex offender registration and management procedures, requires all states to implement the same three-tier classification system according to the offense of conviction.

<sup>15</sup> See section 589.426: [http://www.senate.mo.gov/08info/BTS\\_Web/Bill.aspx?SessionType=R&BillID=193](http://www.senate.mo.gov/08info/BTS_Web/Bill.aspx?SessionType=R&BillID=193).

<sup>16</sup> An abstract of the report is available at: <http://www.lynn.edu/about-lynn/news-and-events/news/new-study-finds-federal-sex-offender-law-not-effective>.

<sup>17</sup> The authors provide an objective mean of comparison across risk regulations regimes: see Hood et al. 2001: 21 and following. Thus, the content of these regimes can be characterized by three relevant basic elements: size, structure and style.

## ii. “Three Strikes and You’re Out”

Beginning in 1993 with Washington State, by the end of the 1990s the federal government<sup>18</sup> and over half of all states had enacted a “Three Strikes” law: anyone sentenced to three separate (violent) offenses is condemned to life prison with no chance of parole<sup>19</sup>. Culminating a decade of “get tough on crime” legislation tools (Vitiello 1997: 395), this legislation was supposed to be a *major innovation to reduce crime*<sup>20</sup>.

In California, in particular, the legislation entered into force in response to the kidnapping and the killing of Polly Klaas and Kimber Reynolds (Vitiello 1997: 412 and following). Despite the constitutional protection of the principle of proportionality in criminal sanctions, the bill imposed a life sentence if the accused had two prior convictions for serious or violent infractions according to the California Penal Code<sup>21</sup>. In parallel with the implementation of these measures, crime rates declined thoroughly countrywide. This enabled supporters of severe detention policies to affirm that newly implemented Three Strikes laws were responsible for that decline (Vitiello 2002).

This is why, even though commentators disagreed on the theoretical justification of the law<sup>22</sup> – on the basis of moral concerns about its fairness, the fact that the law was “valuable mostly in terms of its symbolism and ability to mobilize crime-fearful voters at the polls” (Schulz 1999: 583) or the lack of studies about its potential impacts –, a large part of the debate was focused on empirical data. However, States like New York registered the sharpest regression in crime rates, whilst not having adopted a Three Strikes law: it appears hence that the decrease in crime rates could not be attributed to that legislation – at least not completely. Generally speaking, researchers found little evidence that Three Strikes legislation had reduced violent crime (Schulz 1999: 572 and following).

Some other studies have questioned the effectiveness of Three Strikes law: in California, in particular, “counties that aggressively enforce the law ‘had no greater declines in crime than did counties that used it far more sparingly’”; moreover, researchers found that “crime dropped by 21.3 percent in the six most lenient ‘three strikes’ counties, compared to a 12.7 percent drop in the toughest counties” (Vitiello 2002). In addition to that, some other studies observed that crime rates were declining prior to Three Strikes laws and remained constant after their adoption, suggesting that such legislation had have, at best, an unimportant effect (Zimring et al. 2001) and that “the causes of the decline that were operating prior to the passage of the law continued to be the primary reason for the drop in crime rates” (Vitiello 2002).

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<sup>18</sup> Violent Crime Control and Enforcement Act (VCCLEA), Public Law 103–322, September 13, 1994, 108 Stat 1796.

<sup>19</sup> <http://legal-dictionary.thefreedictionary.com/Three+Strikes+Laws>.

<sup>20</sup> More specifically: “Fueled by public fears of crime and political exploitation of that fear, three strikes legislation was supposed to cut down on violent crime, reduce social costs of crime, and incarcerate more hardened criminals for longer periods of crime” (Schulz 1999: 572).

<sup>21</sup> See <https://www.law.stanford.edu/organizations/programs-and-centers/stanford-three-strikes-project/three-strikes-basics>.

<sup>22</sup> About the change in American penal philosophy, see Vitiello 1997: 422 and following. About judges’ lack of discretion in setting prison terms and the proportionality of this measure, see <http://legal-dictionary.thefreedictionary.com/Three+Strikes+Laws>.

Even studies that estimate that the Tree Strikes legislation reduced participation in criminal activity (in California) highlighted its unintended consequences: first, offenders were more likely to commit more violent crimes; second, the migration of offenders to commit crimes in bordering states had increased. These findings imply that Three Strikes law is no cost-effective means in order to reduce crime rates (Iyengar 2007).

Empirical research on the California case also indicates that Three Strikes legislation has an impact on the size of the prison population and on the expenses linked to it. Older felons remain in prison, despite that fact that the more they age, the less they are criminally active. Such older detainees are expensive for the state (Vitiello 2002). The cost of the law in California is estimated at over \$19 billion. Moreover, according to Stanford University's data, approximately half of the persons sentenced under the Three Strikes legislation are serving sentences for nonviolent crimes. Statistics from the California Department of Corrections illustrates that the legislation excessively touches minorities (Schulz 1999: 581-582; Vitiello 1997) and mentally ill<sup>23</sup> and physically disabled offenders<sup>24</sup>.

In 2012, "Proposition 36" (a voter initiative aimed at reforming Three Strikes legislation) was enacted by Californian voters, eliminating life sentence "for non-serious, non-violent crimes and established a procedure for inmates sentenced to life in prison for minor third strike crimes to petition in court for a reduced sentence"<sup>25</sup>. This change has been a success: numerous detainees have been released<sup>26</sup>; the recidivism rate remains stable<sup>27</sup>; finally, in accordance with the estimates by Stanford University, California will save up to \$1 billion within ten years<sup>28</sup>.

The trend toward increasingly punitive sentencing is not only used as a means of incapacitation of delinquents, but also and very often as a reprisal aimed at satisfying public demand for severer treatment of felons. It is a fact that politicians fear that supporting offenders' rehabilitation could make them appear as too permissive towards criminal activities (Raynor and Robinson 2009). However, meta-analyses on studies conducted on correctional interventions on recidivism indicate that coercive punitive measures – such as supervision and sanctions – "at best, show modest mean reductions in recidivism and, in some instances, have the opposite effect and increase reoffense rates". On the contrary, rehabilitation's results appear to be regularly positive and larger. In that way, rehabilitation treatments have the potential to reduce crime rates while

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<sup>23</sup> See report: "When did prison become acceptable mental healthcare facilities?" (2014), Stanford Law School School Three Strikes Project, available at: [https://www.law.stanford.edu/sites/default/files/child-page/632655/doc/slspublic/Report\\_v12.pdf](https://www.law.stanford.edu/sites/default/files/child-page/632655/doc/slspublic/Report_v12.pdf).

<sup>24</sup> <https://www.law.stanford.edu/organizations/programs-and-centers/stanford-three-strikes-project/three-strikes-basics>.

<sup>25</sup> <https://www.law.stanford.edu/organizations/programs-and-centers/stanford-three-strikes-project/three-strikes-basics>.

<sup>26</sup> See report: "Progress Report: Three Strikes Reform (Proposition 36) 1,000 Prisoners Released", Stanford Law School Three Strikes Project and NAACP Legal Defense and Education Fund, available at: <https://www.law.stanford.edu/sites/default/files/child-page/441702/doc/slspublic/Three%20Strikes%20Reform%20Report.pdf>.

<sup>27</sup> See report: "Proposition 36 Progress Report: Over 1,500 Prisoners Released Historically Low Recidivism Rate" (April 2014), Stanford Law School Three Strikes Project and NAACP Legal Defense and Education Fund, available at: <https://www.law.stanford.edu/sites/default/files/child-page/595365/doc/slspublic/ThreeStrikesReport.pdf>.

<sup>28</sup> <https://www.law.stanford.edu/sites/default/files/child-page/595365/doc/slspublic/ThreeStrikesReport.pdf>.

enhancing public safety; which not seems to be the case for punishment (Lipsey and Cullen 2007; Cullen 2012)<sup>29</sup>.

## B. Public order, transportation safety and terrorism

### i. Heightened policing and security at airports in the USA resulting from 11 September 2001 terrorist attack

On 6 July 2014, the US Department of Homeland announced in an official statement the ban of uncharged electronic devices on certain overseas airports with direct flights to the US<sup>30</sup>. Vaguely announced by Secretary Johnson, the decision was taken in response to intelligence reports stating the possibility to turn these into explosive devices that can avoid detection at airport security checkpoints<sup>31</sup>. This measure is the last of a series of restrictive regulations resulting from the World Trade Centre attacks in 2001 aimed at preventing any threats from arising or entering the country. The first of them was the Aviation and Transportation Security Act<sup>32</sup>, which required that by 19 November 2002 Federal US employees must conduct all passengers' screening.

Such responses and regulations have been classified as 'Security theatre'<sup>33</sup> on several occasions by experts (Chakrabarti and Strauss 2002)<sup>34</sup>, as they consist in measures aimed at providing a perception of security, whilst their monetary costs are high and minimal security benefits are actually achieved (Schneier, 2003). These experts believe that resources should be employed in investigation and emergency response; moreover, they state that changes to airport security since 11 September 2001 have been detrimental<sup>35</sup>.

Specialists affirm that risk analysis methods can help assess counterterrorism measures "by developing a framework for a full portfolio analysis of the multiple consequences of precaution against terrorism and its alternatives" (Stern and Wiener 2006). Generally speaking, a precautionary approach to terrorism often demands large as well as high-priced interventions. A well-founded approach to risk assessment and management needs thus to include an evaluation of *the full portfolio of risks*. Moreover, while decision makers adopting national security measures need instruments to ensure that empirical-based risk analysis has preceded precautionary actions,

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<sup>29</sup> Two models based on rehabilitation treatments will be presented in part 2 – Good examples.

<sup>30</sup> <http://www.tsa.gov/press/releases/2014/07/06/enhanced-security-measures-certain-airports-overseas>.

<sup>31</sup> <http://www.dhs.gov/news/2014/07/02/statement-secretary-johnson>.

<sup>32</sup> ATSA, Pub.L. 107-71, 19 November 2001 Available at: <http://www.gpo.gov/fdsys/pkg/PLAW-107publ71/html/PLAW-107publ71.htm>.

<sup>33</sup> See Schneier, Bruce (2007-01-25), "In Praise of Security Theater", available at: [https://www.schneier.com/essays/archives/2007/01/in\\_praise\\_of\\_security.html](https://www.schneier.com/essays/archives/2007/01/in_praise_of_security.html).

<sup>34</sup> See also Felten, Edward (2004-07-09), "Security Theatre", available at: <https://freedom-to-tinker.com/blog/felten/security-theater/>, Stross, Randall, (2006-12-17), "Theater of the Absurd at the T.S.A.", available at: <http://www.nytimes.com/2006/12/17/business/yourmoney/17digi.html> and Rafi Sela's statements: [http://www.huffingtonpost.com/2013/12/23/airport-security\\_n\\_4494308.html](http://www.huffingtonpost.com/2013/12/23/airport-security_n_4494308.html).

<sup>35</sup> See the debate <http://www.economist.com/debate/days/view/820> and the article by Kenny, Charles (2012-11-18), "Airport Security Is Killing Us", available at: <http://www.businessweek.com/articles/2012-11-18/how-airport-security-is-killing-us>.

it appears that in the US case, *ex ante* analyses have been very poor. Yet, in the area of health and environmental, for example, regulatory impact analyses – concentrating on benefits and costs – must routinely be carried out while developing regulations. Experts therefore strongly recommend decision makers to establish/develop comparable mechanisms in the field of counterterrorism and national security policies (Stern and Wiener 2006: 396-397).

## ii. Recent regulations against the threat of terrorism related to the Islamic State of Iraq and Syria (ISIS)

In the UK, a new draft law against the threat of terrorism related to the most recent and highly mediatised ISIS emergence (Counter-Terrorism and Security Bill<sup>36</sup>) is being prepared. This regulation will be the 7<sup>th</sup> on the topic since 2001. The draft bill provides for measures as seizure of passports from persons suspected of involvement in terrorism, temporary exclusion from the UK, upgraded prevention and investigation measures, the obligation to report extremism and the power to require Internet service providers to retain data showing the IP address allocated to a device in order to match individuals to Internet use. These measures have been subject to criticism by NGOs like Amnesty international on the basis of the infringement of civil liberties<sup>37</sup> and by university leaders and lecturers, who fear for freedom of speech<sup>38</sup>.

The UK is not the only country that is willing to introduce the deprivation of citizenship for those who may be involved in fighting, extremist activity or terrorist training overseas (on behalf of ISIS in particular), even though several experts agree on the difficulties associated with the implementation of this measure in the light of international law (Walmsley 2006; Brandvoll 2014)<sup>39</sup>. In France, draft legislation to this effect was submitted to the *Assemblée Nationale* on 11 June 2014 but was finally defeated on 4 December 2014<sup>40</sup>. In fact, the loss of nationality is an existing administrative measure that must meet certain conditions mentioned in the Civil Code.

## iii. Regulation on Ebola prevention: entry screening at airports

On 8 August 2014, the WHO advised that the Ebola outbreak in West Africa constitutes an “extraordinary event” and a public health risk to other countries and recommended a coordinated international response to stop and reverse the spread of Ebola<sup>41</sup>. In some Occidental countries, an effect of panic (both in the media and public opinion) has followed the spread of the disease.

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<sup>36</sup> Bill 142 2014-2015; text available at: <http://services.parliament.uk/bills/2014-15/counterterrorismsecurity.html>.

<sup>37</sup> According to Rachel Logan, “Careful, detailed analysis is needed – not fast-tracking and grandstanding”: <http://www.amnesty.org.uk/press-releases/counter-terrorism-bill-dangerous-rush-through-grab-bag-measures>.

<sup>38</sup> <http://www.timeshighereducation.co.uk/news/academics-label-proposed-counter-terrorism-and-security-bill-censorship/2017351.article>.

<sup>39</sup> See also § 39 of the UN General Assembly Report of 19 December 2013 to the Secretary General on Human rights and arbitrary deprivation of nationality (A/HRC/25/28).

<sup>40</sup> [http://www.assemblee-nationale.fr/14/dossiers/decheance\\_nationalite\\_contre\\_armees\\_police.asp](http://www.assemblee-nationale.fr/14/dossiers/decheance_nationalite_contre_armees_police.asp).

<sup>41</sup> <http://www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/>.

As a response to that effect, the US Department of Homeland Security announced on 8 October 2014 enhanced Ebola screening at five U.S. Airports for all people entering U.S. from Ebola-affected countries<sup>42</sup>. This complements the exit screening protocols already implemented in the affected countries. This additional measure was taken even though, according to the US Department of Homeland Security,

In the last two months since exit screening began in the three countries, of 36,000 people screened, 77 people were denied boarding a flight because of the health screening process. None of the 77 passengers were diagnosed with Ebola and many were diagnosed as ill with malaria, a disease common in West Africa, transmitted by mosquitoes and not contagious from one person to another<sup>43</sup>.

Screening is now also being carried out at airports in several countries, including the UK<sup>44</sup>, Canada<sup>45</sup>, the Czech Republic and France<sup>46</sup>.

The effectiveness of the extra-screening measure has yet to be proved. However, scientists advise governments to

carefully balance the potential harms from travel restrictions imposed on countries that have Ebola virus activity against any potential reductions in risk from Ebola virus importations. Exit screening of travellers at airports in Guinea, Liberia, and Sierra Leone would be the most efficient frontier at which to assess the health status of travellers at risk of Ebola virus exposure, however, this intervention might require international support to implement effectively (Bogoch et al 2014)<sup>47</sup>.

They discourage the introduction of extra-entry screening on passengers – because of their inefficiency and their cost – and highlight the importance of population information in order to contribute to controlling the epidemic's spread. Moreover, according to the European Centre for Disease Prevention and Control, given that exit screening is being conducted effectively, the added value of entry screening is likely to be very small, while representing a high investment (European Centre for Disease Prevention and Control 2014).

#### iv. Stun grenades' ban in France

Following the death of an environmental activist in France on 26 October 2014 during a demonstration against the building of a dam in southern France, French Interior Minister Cazeneuve banned on 13 November 2014 the police force from using stun grenades. On the same day, a police inspectorate report commissioned by Minister Cazeneuve was published<sup>48</sup>. The report outlined three options regarding the employment of munitions during law enforcement operations. The solution adopted by the Minister is the most restrictive one, namely the outright

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<sup>42</sup> <http://www.dhs.gov/news/2014/10/08/enhanced-ebola-screening-start-five-us-airports-all-people-entering-us-ebola>.

<sup>43</sup> <http://www.dhs.gov/news/2014/10/08/enhanced-ebola-screening-start-five-us-airports-all-people-entering-us-ebola>.

<sup>44</sup> <https://www.gov.uk/government/news/public-health-england-enhanced-ebola-screening-process>.

<sup>45</sup> <http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/ebola/response-reponse/index-eng.php?id=response>.

<sup>46</sup> <http://ebola.sante.gouv.fr/actualites-ressources-rubriques/actualites/article/dispositif-de-lutte-contre-le-58>.

<sup>47</sup> NGOs like Médecins sans Frontières/Doctors Without Borders stress the importance of population's awareness on symptoms and precautions to be taken: <http://www.msf.ch/news/communiqués-de-presse/detail/la-reponse-internationale-a-lepidemie-debola-un-risque-de-double-echec/>.

<sup>48</sup> Baudet and Miramon 2014.

ban of the two types of grenades employed by the police force. The decision was obviously taken in haste and under pressure.

Moreover, even though the construction of the dam has been temporarily suspended, Minister Cazeneuve's aforementioned decision does not take into account the reasons why the demonstration took place<sup>49</sup>. In addition to conflict of interest matters<sup>50</sup>, the expert appraisal delivered in October 2014 points out several environmental issues and strongly recommends variations in respect of the works; it indicates five potential crisis-avoidance scenarios (Forray and Rathouis 2014).

The response was thus very quickly decided (possibly correctly, but in any case without careful consideration), and not really responding to any of the key issues that created the situation.

### C. Short overview of some examples from the field of economic regulation

As we mentioned above, bad RRR examples affecting economic and business regulation are, unfortunately, plentiful, and have been amply documented in studies, including in particular those developed for the Dutch Risk and Responsibility programme, as well as in the work of the UK Risk and Regulation Advisory Council (see further section in this report). We will just here briefly discuss a couple of examples to point out the specific RRR features that they highlight.

#### i. Building and fire safety regulations

These regulations are a frequent area of RRR reactions. Accidents are typically highly visible and covered in the news, experts are plentiful and ready to offer recommendations, and there are important economic interests that also push for more regulation (enterprises working in retrofitting buildings, manufacturing and installing new equipment etc.). Thus, while it results in sub-allocation of economic resources and thus has overall a negative economic impact, there may be a strong business constituency for over-regulation.

The lifts safety retrofitting law and regulations in France, which we presented in chapter 2, are a perfect illustration of this phenomenon. Studies conducted as part of the Dutch Risk and Responsibility programme (see van Tol 2012 and Helsloot, Schmidt 2012) have also highlighted a number of cases linked to fire safety (after a fire in a café, and another in Schiphol, both leading to fatalities, and from there to over-regulations without proportion with the actual issues).

These cases all highlight several important characteristics of worse case RRR reactions: first, reactions out of proportion with the original event, and often without much relation with its specifics. Second, and most interestingly, the fact that the costs of the RRR are diffuse and often

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<sup>49</sup> See Viguié, Bernard (2014-11-02), "L'Etat de droit' à géographie variable", *Libération*, [http://www.liberation.fr/politiques/2014/11/02/l-etat-de-droit-a-geographie-variable-de-morlaix-a-albi\\_1134663](http://www.liberation.fr/politiques/2014/11/02/l-etat-de-droit-a-geographie-variable-de-morlaix-a-albi_1134663).

<sup>50</sup> Valo, Martine (2014-11-03), "Le barrage de Sivens, un dossier entaché de conflits d'intérêts", *Le Monde*, [http://www.lemonde.fr/planete/article/2014/11/03/barrage-de-sivens-un-dossier-entache-de-conflits-d-interets\\_4517419\\_3244.html](http://www.lemonde.fr/planete/article/2014/11/03/barrage-de-sivens-un-dossier-entache-de-conflits-d-interets_4517419_3244.html). See further explanations in Les Décodeurs and Gittus, Sylvie (2014-11-05), "Qui est à l'origine du projet du barrage de Sivens?", *Le Monde*, [http://www.lemonde.fr/les-decodeurs/article/2014/11/05/qui-est-a-l-origine-du-projet-du-barrage-de-sivens\\_4518076\\_4355770.html](http://www.lemonde.fr/les-decodeurs/article/2014/11/05/qui-est-a-l-origine-du-projet-du-barrage-de-sivens_4518076_4355770.html).

poorly perceived, while its expected benefits are taunted as considerable, typically without much data or with very “fuzzy” data, but with vivid illustrations – and, just as crucially (if not more), there are very well defined economic interests *in favour* of the RRR decision, hidden from the public view, but perfectly conscious of what they stand to gain, and well organized (whereas the “losers” are many, diffuse, unconscious and not organized).

## ii. Food scandals: BSE, Foot-and-Mouth, “Horsegate” etc.

Food scares have been around for centuries, possibly for as long as there have been cities and food markets, rather than only self-consumption, and certainly since the Middle Ages at least (Ferrières 2005). These food scares have usually been grounded in the fear of being cheated by unscrupulous sellers, sold an adulterated food, and also often linked to novelties (new foods, processes, etc.). The difficulty is that both in earlier times and nowadays, these scares have sometimes been quite “reasonable” in the sense of corresponding to a genuinely high risk, and sometimes fully disconnected from what science and risk analysis would suggest. While consumers until the late 19<sup>th</sup> century at least had much excuse for not grounding their fears in a food science that had little validity, knowledge of pathogens and chemicals has since then greatly developed, but “scare” reactions persist. It is far from obvious that all these “scares” are indeed disproportionate – what is certain, is that they all relate to a lack of trust, as well as to the question of trade-offs.

If we consider successive food crises from a risk perspective, the results may be somewhat contrasted. The Bovine Spongiform Encephalopathy (BSE) crisis was characterized first by dissimulation or at least denial, with a UK minister claiming there was no risk whatsoever (and emphasizing that he fed hamburgers to all his family), whereas there was in fact significant uncertainty. While there remains some amount of doubts and controversy over the origins of the disease, it appears relatively clear that the Variant Creutzfeld-Jakob Disease (CJD) cases were caused by the consumption of infected beef, and that the BSE epidemic itself was most probably caused by the use of infected animal remains (in particular sheep and cows) in animal feed. There is now debate as to whether insufficient heating of these remains (as prions resist to very high heat) was also a cause of the outbreak<sup>51</sup>. In any case, the risk was quite real, but its scale turned out to be considerably less than feared at some point. A worldwide total of slightly above 200 cases (all fatal) were counted as of 2014<sup>52</sup>, which is a far cry from the thousands or even millions that some alarmists predicted some 20 years ago – but still not an insignificant tally, if one looks only at the UK (177 fatal cases). Thus, BSE was not a groundless “scare”, but a real risk. It was, however, a limited one. The response to the crisis (massive slaughter of infected herds, considerably increased oversight in abattoirs etc.) is likely with hindsight to have been exaggerated (and, as it continues to impose serious costs today, its cost-benefit ratio is likely very poor). What is important to note is how much this over-reaction was fed by the initial dissimulation and misleading statements, which led the public (in the UK, but even more in other countries) to completely lose trust in assurances of safety.

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<sup>51</sup> For background and data on BSE and CJD, see: <http://www.cjd.ed.ac.uk/>

<sup>52</sup> See <http://www.cjd.ed.ac.uk/documents/worldfigs.pdf>

By contrast, there is no doubt that the over-reaction to the 2001 Foot-and-Mouth disease outbreak in Britain was fully without merit from a safety angle, and more the lingering effects of the BSE-bred distrust<sup>53</sup>. Finally, the 2013 meat adulteration scandal (a.k.a. “Horsegate”) had food safety implications that were so remote as to be really negligible (but had real cultural resonances in countries where eating horse is seen as unacceptable). It nonetheless became a full-blown “scare”, with massive media coverage, and regulatory consequences (which, if they have been less drastic than could have been feared, are still clearly RRR-driven).

From our perspective of trying to mitigate the RRR in future crises, these cases have a couple of important lessons. First, dissimulation and unwarranted claims that “all is well and safe” breed distrust, and reaching some level of trust again after such a breakdown in confidence may take many years, and require in the meantime massive unnecessary costs. Second, several of these food crises have their roots at least in part in efforts to cut costs in production to sell meat or meat products at the lowest price possible (using animal remains as feed in BSE, sourcing meat products far and wide in “Horsegate”). These crises could have been an opportunity to more strongly discuss the question of trade-offs between safety (and environmental protection, humane treatment of animals etc.) on the one hand – and availability of very low-cost meat products. While there was some discussion of this issue, it was quite limited, and quickly the emphasis was put on the policy (mostly regulatory) response. A better response to crises would thus involve more transparency, openness about risks and uncertainties, and a genuine discussion of trade-offs.

### iii. Other cases – from trains to medical devices – wrong targets, hidden targets?

In the chapter on inspections and enforcement, we discuss a bit longer the response to the PIP breast implants scandal in France<sup>54</sup>. Characteristically, this combines poor understanding and analysis of the roots of the scandal, over-emphasis on one type of regulatory response (inspection of manufacturing facilities) with major adverse, unintended consequences – and absence of discussion of the possible role of other parts of the “safety chain” (practices of plastic surgeons), and again of possible trade-offs (between widespread plastic surgery, with a demand for lower costs, and safety). As a consequence, over-regulation in response to criminal fraud for implants that are mostly used on a purely voluntary (one could say “vanity”) basis<sup>55</sup> is likely to bring about a reduction in availability and improvement of life-saving devices.

In a wholly different field, a last case will illustrate how RRR-based decisions often respond to a kind of “hidden agenda”. We have described above how RRR in construction often fits the agenda of private businesses that stand to benefit. In other cases, it may fit a political agenda. In October 2000, the Hatfield train crash led to 4 deaths and several dozen injured. This was not the most severe rail accident in Britain in that period but it came just a year after the worst one (Ladbroke Grove, where 31 died and over 500 were injured), and it was linked to a more structural problem (rail fatigue rather than location-specific safety issues). It also revealed some serious shortcomings in the way the rail infrastructure company, Railtrack, worked (repairs planned but not completed, inadequate maintenance records and assets register).

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<sup>53</sup> See chapter 5 of this report on this and the contrast with the far better managed 2007 outbreak.

<sup>54</sup> The scandal affected other country, but the regulatory response so far has been mostly in France.

<sup>55</sup> There are of courses cases where breast implants are reparative therapy e.g. after cancer surgery, but these are not the majority.

The Government swiftly imposed 1200 speed restrictions on points identified as higher risk on the whole network, and an accelerated programme of replacement. This imposed major costs on the economy overall (estimated by one source at 6Mln GBP per day – Murray 2001), and pushed Railtrack into bankruptcy in 2001 (see Morris 2006).

While the accident was serious, and there is agreement that there was a real (if not fully quantified) risk that was serious enough to warrant action, the extremely hard line and short schedule decided upon by the Government were bound to lead to the bankruptcy of the railway infrastructure operator (Railtrack), which suited the overall Government rail policy. Thus, a decision was taken that was most probably at least somewhat excessive in comparison with risks, which had the double benefit for the Government of shielding them from any potential criticism, and of helping to achieve other policy objectives.

These two unrelated examples show both the potential adverse effects of RRR decisions (particularly when taken after an insufficient stock-taking and analysis), sometimes leading to “missing” the real problem wholly or partly, and the way the RRR is often used to advance specific agendas of policymakers or other actors.

#### 4. Good or partially good examples: situations where “full blown RRR” could have taken place, but did not – or was at least limited

Different kinds of cases may be defined as “good examples”. They have been chosen as such because they present situations where a “full blown RRR” could have taken place, but did not. Some of them illustrate cases in which *initial response* of decisions makers was calm and serene – but the final solution resembles a RRR situation; some others exemplify situations whereby, despite an ominous preliminary reaction, the conclusion lead to promising perspectives. In both cases, only part of the response forms a good example.

##### A. 2005 London bombings

On 7 July 2005, a series of four coordinated suicide attacks struck London’s public transport system during the morning rush hour. The explosions targeted civilians and caused the dead of 56 people, including the bombers; more than 700 people were wounded (House of Commons 2006: 2). From an economic perspective, the main impact of the attacks was a daylong disturbance of London transportation and mobile telecommunication infrastructure (Busch 2007: 167). Two weeks later, on 21 July 2005, four attempted bomb attacks disrupted part of London's public transport system around midday.

In the immediate aftermath of the 7 July attacks, Prime Minister Blair promised the “most intense police and Security Service action to make sure we bring those responsible to justice” (House of Commons 2006: 8). This promise took one step forward with the Terrorism Act 2006<sup>56</sup>, some of which terms have proven to be very controversial – namely because of the extension of the period of detention without charge. This measure was adopted as a response to the bombings, even though the Government had already been working to counter Islamist terrorism. Moreover, the reduction of the country threat level from ‘severe general’ to ‘substantial’ immediately before the July 2005 attacks was considered reasonable (Intelligence and Security Committee 2006: 5 and 20).

However, the first reaction of the government generally consisted in a firm condemnation of the attacks and an appeal for calm. First, it stated the determination to defend democratic values:

It is important however that those engaged in terrorism realise that our determination to defend our values and our way of life is greater than their determination to cause death and destruction to innocent people in a desire to impose extremism on the world. Whatever they do, it is our determination that they will never succeed in destroying what we hold dear in this country and in other civilised nations throughout the world.<sup>57</sup>

Secondly, Prime Minister Blair affirmed his confidence in the police and the intelligence services:

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<sup>56</sup> Available at: <http://www.legislation.gov.uk/ukpga/2006/11/contents>.

<sup>57</sup> Statement by Prime Minister Tony Blair on the London Bomb Blasts: <http://www.telegraph.co.uk/news/1493566/Blair-they-will-never-succeed.html>.

I know of no intelligence specific enough to have allowed them to prevent last Thursday's attacks. By their very nature, people callous enough to kill completely innocent civilians in this way are hard to stop. But our services and police do a heroic job for our country day in day out and I can say that over the past years, as this particular type of new and awful terrorist threat has grown, they have done their utmost to keep this country and its people safe (Intelligence and Security Committee 2006: 2).

Third, he invited the population to stay calm and get back to normal life:

we know why these things are done, they are done to scare people and to frighten them, to make them anxious and worried. Fortunately in this instance there appear to have been no casualties. The police have done their very best, and the security services too, in the situation and I think we have just to react calmly and continue with our business as much as possible, as normal<sup>58</sup>.

In fact, the aftermaths of the attacks demonstrated strength and efficiency in London: the rescuers responded rapidly, the surveillance cameras in tube stations facilitated the identification of suspects by the police force and the Londoners showed remarkable calmness and restraint despite the tragic events<sup>59</sup>. Prime Minister Blair did not fail to express his appreciation for that:

7 July will always be remembered as a day of terrible sadness for our country and for London. Yet it is true that, just four days later, London's buses, trains and as much of its underground as possible are back on normal schedules; its businesses, shops and schools are open; its millions of people are coming to work with a steely determination that is genuinely remarkable. (Intelligence and Security Committee 2006: 10)

## B. Criminal Justice

### i. Circles of Support and Accountability

Circles of Support and Accountability (COSAs) are considered to be one-off in their method to sex offenders' risk management in society. COSAs provide high-risk sex offenders re-entering society after imprisonment support through a group of trained volunteers. The role of volunteers is to support them "in their rehabilitation process and help them to desist from reoffending" (Höing et al. 2013). COSA was initiated in Canada and is ingrained in the restorative justice tradition, on the basis of two key-statements: *no more victims* and *no one is disposable*. It has also been delivered in Europe, in the United States and in New Zealand.

In the European model, a circle consists of three to six trained volunteers (the "inner circle") who meet the core member face to face on a regular basis (in the beginning at least weekly) and offer 24/7 support in between [...]. The inner circle is assisted by an "outer circle" of professionals who are involved in the core members' after-care arrangements (e.g., their probation officer and their therapist and the local police officer). Circles are supervised by a professional circle coordinator who coaches the volunteers and facilitates the cooperation between inner- and outer circle and the cooperation within the outer circle. At any moment, the inner circle can report concerns about risk to the circle coordinator and the professionals who—if necessary—can take appropriate measures to

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<sup>58</sup> <http://pmtranscripts.dpmc.gov.au/preview.php?did=21835>.

<sup>59</sup> "The British have been targeted with bombs in the past during World War II and more recently from the Irish Republican Army. Perhaps that's part of the reason they showed such calm in the midst of tragedy": Hinman 2009: 112.

prevent re-offending [...]. Circles last as long as necessary, usually at least one- to one-and-a-half years, but often longer [...] (Höing et al. 2013: 268).

By fulfilling the *need to belong* – a human basic need –, the COSA approach has displayed its ability to prevent recidivism – sexual, but also general re-offence. Moreover, a certain number of studies show that the results obtained with COSA are better than those attained with sex offenders controls, despite aggressive media campaigns against this method (Höing et al. 2013: 290-291).

In the Netherlands, a two-year pilot project supported by the Ministry of Justice started in 2009. The first objective followed by the implementation of COSA was to prevent new victims of sexual offense. A publication reporting the results of the pilot project stated that COSA could be successfully implemented in the Dutch context, made recommendations about possible and desirable improvements, and established a generally positive stocktaking of the first phase of the experience (Höing and Vogelvang 2011).

## ii. The Risk-Need-Responsivity model

In Canada, criminalists have developed a rehabilitation paradigm founded on a risk management approach, known as the Risk-Need-Responsivity (RNR) model. It is a comprehensive intervention strategy including theory, research and treatment technology aimed at considering individual criminals ethically and efficiently. Constructed on a science-based behavioural and criminological theory, this approach identifies what the intervention should target and the way to do so in an effective way; moreover, it develops the technology that allows achieving the goal. Several experts consider it as the dominant treatment approach in terms of its legitimacy and claim to be used in preference to other options (Cullen 2012: 104 and following). As its name implies, RNR method has three core principles: first, the *Risk principle* – “match the level of service to the offender's risk to re-offend”; second, the *Need principle* – “assess criminogenic needs and target them in treatment”; third, the *Responsivity principle* – “maximize the offender's ability to learn from a rehabilitative intervention by providing cognitive behavioural treatment and tailoring the intervention to the learning style, motivation, abilities and strengths of the offender”<sup>60</sup>.

RNR approach was developed in Canada during the 1980s and formalized at the beginning of the 1990s. Since then, it has been applied with increasing success to evaluate and rehabilitate offenders in Canada and other parts of the world, as in New Zealand (Polaschek 2012<sup>61</sup>); it has been accompanied by significant reduction in recidivism's rates among offenders treated in programs adopting this approach and the construction of safer communities (Ward et al. 2007; Corabian et al. 2011; Looman and Abracen 2013). Due to its success, this model is constantly improved, reworked and developed by experts in several countries.

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<sup>60</sup> See Bonta, James and Andrew D. A. (2007-2008), “Risk-Need-Responsivity Model for Offender Assessment and Rehabilitation”, Public Safety Canada website: <http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/rsk-nd-rspnsvty/index-eng.aspx>.

<sup>61</sup> In this article, the author states that the RNR model's empirical validity and practical utility justify its place as a dominant model ; nevertheless, nowadays much work on offender rehabilitation still needs to be done.

### iii. Inviolability of human dignity vs. fight against terrorism

In response to the 11 September 2001 attacks, the *Luftsicherheitsgesetz*<sup>62</sup> entered in force in Germany on 15 January 2005. Among other provisions, the law granted the Federal army the permission to shoot down commercial airliners if their designation as a weapon by hijackers was apparent.

On 15 February 2002, the German Constitutional court declared the regulation completely unconstitutional, namely incompatible with the right to life in conjunction with the guarantee of human dignity – to the extent that the disputed provision would have affected persons on board the aircraft who were not participants in the crime<sup>63</sup>. Regarding the latter, the Constitutional court stated that:

By their killing being used as a means to save others, they are treated as objects and at the same time deprived of their rights; with their lives being disposed of unilaterally by the state, the persons on board the aircraft, who, as victims, are themselves in need of protection, are denied the value which is due to a human being for his or her own sake. (§ 122)

The judgment states that the very essence of the passengers' fundamental rights is violated by the regulation. The essence of fundamental rights is considered to be sacrosanct and may not be restricted. If that is the case, implicitly, at least one of the conditions under which fundamental rights may be restricted (namely the fact that restrictions on fundamental rights must be justified in the public interest or for the protection of the fundamental rights of others; the requirement of a sufficient legal basis for administrative acts – unless in cases of serious and immediate danger –; and the respect of the principle of proportionality) is not fulfilled. Among these conditions, the proportionality requirement of the restrictive measure appears to be a basic precondition for it being acceptable – and, therefore, constitutional: the German Constitutional court affirms that the essence of the fundamental right remains unaffected as long as important interests of protection of third parties legitimize the encroachment and as long as the principle of proportionality is respected (§ 152).

From what has been mentioned above, we can draw the following conclusions. First, if we want to avoid RRR, a competent body must examine every regulation or action taken by decision makers in response to an accident or a threat in the light of basic conditions of acceptability – as far as possible, prior to the adoption of the measure. This implies, on the one hand, that the consultation body must have the necessary technical expertise required to provide this function; on the other hand, the conditions of acceptability are set in advance. Second, in accordance with the generally accepted legal tradition, the measure must not undermine the principle of human dignity. This is not only a keystone of the rule of law<sup>64</sup>, but human life has also a value that can be calculated in economic terms – using techniques such as the Human Capital Approach or the Quality-Adjusted Life Years method (Roig Davison and Ruiz García, 2006; Adler, 2005; Frank and Sunstein, 2000).

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<sup>62</sup> *Luftsicherheitsgesetz* of 11.1.2005, BGBl I, 78 (LuftSiG), available at: <http://www.gesetze-im-internet.de/luftsig/index.html>.

<sup>63</sup> BVerfG, 1. BvR 375/05 of 15.2.2006, available at: [http://www.bundesverfassungsgericht.de/entscheidungen/rs20060215\\_1bvr035705.html](http://www.bundesverfassungsgericht.de/entscheidungen/rs20060215_1bvr035705.html).

<sup>64</sup> See art. 1 of UN Universal Declaration of Human Rights: “All human beings are born free and equal in dignity and rights”.

The action of the state should therefore be evaluated by a cost-benefits analysis<sup>65</sup>. Third, the measure needs to be proportionate to the objective pursued (namely, it has to meet the requirements of necessity and suitability of the measure taken, as well as that of proportionality in the narrower sense). The proportionality principle – considered as a general principle of EU law and described as intrinsically connected to liberal constitutionalism (Stone Sweet and Mathews, 2009) – aims at rationalizing the decision-making process by securing that the decision is taken in an objective way (Harbo 2010). At least it gives the impression thereof. In order to ensure the proper functioning of the mechanism, this should be accompanied by technical expertise.

## C. Regulation of Economic Activities

### i. Management of Deepwater Horizon's explosion in 2010

On 20 April 2010, a series of two or more explosions followed a gas release on the *Deepwater Horizon* oil rig (contracted by BP) in the Gulf of Mexico. As a result of the accident, eleven people died and other workers were injured. The fire burned for 36 hours before the vessel sank, and hydrocarbons (between 3.26 and 5 million barrels of oil) leaked into the Gulf before the well could be closed and sealed on 15 July 2010<sup>66</sup>. According to the Deepwater Horizon Study Group report, as in other similar disasters, “[a]n industrial environment of inappropriate cost and corner cutting was evident in all of these cases as was a lack of appropriate and effective governance—by either the industry or the public governmental agencies” (2011: 10)<sup>67</sup>.

The US government did not sit idle. Within days after the accident, it established a Unified Area Command to manage the response effort; during the next 83 days following the accident, numerous attempts were made to stop the oil from enter the Gulf of Mexico<sup>68</sup>. Several reports on the disaster were commissioned<sup>69</sup>. Moreover, given the governance challenges that the spill represented, its legal complexity and the ineffectiveness shown by the Minerals Management Service (MMS), Secretary of the Interior Salazar divided the MMS into the Bureau of Ocean Energy Management, Regulation, and Enforcement, the Office of Natural Resource Revenue and the Bureau of Safety and Environmental Enforcement (BOEMRE)<sup>70</sup>. By so doing, “he separated leasing, environmental oversight, and money collection, but also created more opportunities for horizontal interaction” (Osofsky 2011: 1089). The BOEMRE was later subdivided into Bureau of Ocean Energy Management, in charge on *resource development and energy management functions*, and the Bureau of Safety and Environmental Enforcement, in charge of *safety and enforcement functions*. In January 2011, the US government established a permanent advisory body specialized

<sup>65</sup> For an example of a cost-benefits analysis of the measure provided for by *Luftsicherheitsgesetz*, see Roig Davison and Ruiz García, 2006: 12 and following.

<sup>66</sup> <http://www.bp.com/en/global/corporate/gulf-of-mexico-restoration/deepwater-horizon-accident-and-response.html>.

<sup>67</sup> See also National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling 2011.

<sup>68</sup> The measures are described in pp. 6 and following.

<sup>69</sup> Such as Bureau of Ocean Energy Management, Regulation and Enforcement (2011-09-14), "Report regarding the causes of the April 20, 2010 Macondo well blowout", U.S. Government, among many others.

<sup>70</sup> Secretarial Order No. 3299 (2010-05-19), *Establishment of the Bureau of Ocean Energy Management, the Bureau of Safety and Environmental Enforcement, and the Office of Natural Resources Revenue*.

in the topic, the Ocean Energy Safety Advisory Committee. In addition to that, the Coast Guard oversaw offshore drilling, with respect to safety and spill response.

Such reorganisation, inherent to the introduction of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) – that sat up a federally controlled approach in response to the crisis –, anticipated the need for many horizontal interactions and for a clear leader following the disaster, by founding a national response team including federal departments and agencies and state and local government representatives. Even though this organisation raised questions about the interaction between different bodies, these horizontal dynamics, aimed at ensuring functional governance, were considered as necessary because of “the nature of deepwater drilling and the spill” (Osofsky 2011: 1091).

Soon after the *Deepwater Horizon* accident, the U.S. Department of Interior issued the Drilling Safety Rule and the Workplace Safety Rule. Both of them aim at improving the safety of drilling operations and the workplace according. They indicate the use of the already-existing Best Available and Safest Technology (BAST) – strongly recommended by the Deepwater Horizon Study Group’s report (2011: 94 and following) – and make it mandatory for operators to implement the Safety and Environmental Management System (SEMS). However, the question remains open whether the decision to promote these new regulations was weighed carefully or whether it was taken under public pressure – actually blowing smoke in the eyes of the American and international public to show that the government was doing something. Indeed, the Drilling Safety Rule was presented as an *interim* regulation “to enhance safety measures for energy development on the outer continental shelf”<sup>71</sup>.

Moreover, even though there existed a conflict of interests within MMS – namely “to collect revenue, provide regulatory oversight, and facilitate energy development” (Carrigan 2013) –, there is presently no evidence that this played a fundamental role in facilitating the Deepwater horizon’s accident. Moreover, it has been said that the fact that MMS developed standards for offshore operations made it an industry partner rather than an independent regulator. Nevertheless, we can be tempted to opt for considering that MMS was scapegoated for the disaster. Indeed, over the last years of its existence, fewer and fewer resources had been allowed to the agency for environmental protection – both by the Congress and the President –, whilst priority was accorded to rising revenues. At the end of the day, the responsibility of politicians has never been invoked, despite the fact that MMS did very probably its best with the resources and the instructions given (Carrigan 2013).

## ii. Santiago de Compostela’s derailment

On July 24 2013 a high-speed train derailed in the vicinity of the railway station of Santiago de Compostela. The cause of the accident was excessive speed: the train was travelling at 179 km/h approaching to the accident site, whilst the speed limit was 80 km/h. Of the 227 people (and an undetermined number of children under 4) aboard, around 152 were injured and 80 died.

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<sup>71</sup> [http://www.doi.gov/news/pressreleases/upload/093010\\_Fact-Sheet\\_Drilling-Safety-Rule.pdf](http://www.doi.gov/news/pressreleases/upload/093010_Fact-Sheet_Drilling-Safety-Rule.pdf).

The final report ordered by the Ministry of Development (*Ministerio de Fomento*) states that the reason for that were an infringement of the speed limit regulation and a lack of driver attention – the latter had to answer the phone in the normal course of the exercise of his duties (Comisión de Investigación de Accidentes Ferroviarios 2014: 7, 25 and 104).

In the immediate aftermath of the accident, Prime Minister Rajoy expressed his solidarity with the victims, declared three days of mourning and visited the area of the accident<sup>72</sup>. Following the *Comisión de Investigación de Accidentes Ferroviarios*' (CIAF) recommendation, Adif, the Spanish rail authority, announced the installation of speed-restricting installations to enforce speed limits in the accident site and in several sections of Spain's rail network<sup>73</sup>. RENFE, the Spanish train operator begun to review protocols on communication between train drivers, control staffs and train crews<sup>74</sup>.

On 9 August 2013, Minister of Development announced a set of measures (a total of 22) aimed at improving the infrastructure, the quality of staff training, the mobile equipment, and the management of passengers: this reaction appears to be a RRR case. Nevertheless, most of these measures are in line with CIAF's preliminary or final recommendations (Comisión de Investigación de Accidentes Ferroviarios 2014: 105 and following). The government indicated also the institution of an independent body with the powers to regulate, control and supervise everything related to safety performance in the railway transportation<sup>75</sup>. With the foundation of the *Agencia Estatal de Seguridad Ferroviaria*, a stable reference framework in the field should be established (Comisión Técnico Científica para el estudio de mejoras en el Sector Ferroviario 2014: 31).

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<sup>72</sup> See [http://www.bbc.co.uk/mundo/ultimas\\_noticias/2013/07/130724\\_ulntot\\_descarrila\\_tren\\_santiago\\_lav](http://www.bbc.co.uk/mundo/ultimas_noticias/2013/07/130724_ulntot_descarrila_tren_santiago_lav).

<sup>73</sup> Adif's circular is available at: <http://ep00.epimg.net/descargables/2013/08/29/e809ef286b264246827c7518d3211b2f.pdf>.

<sup>74</sup> See the press release: <http://www.fomento.gob.es/NR/rdonlyres/C80DB993-9E5D-41B9-BF95-AD47CD28DCE4/119251/130802NotaAccidenteSantiago.pdf>.

<sup>75</sup> Real Decreto que modifica la Ley 28/2006 de Agencias. For a description of the independent agency see Comisión Técnico Científica para el estudio de mejoras en el Sector Ferroviario 2014: 30-31.

## 5. Understanding and mitigating the RRR – the UK’s example

Although not referred to as the Risk Regulation Reflex, the UK was the first to identify as an issue of concern the regulatory overreaction to high profile tragedies. What marked out these cases was the public concern over the tragedy, rather than any necessary systemic or strategic significance. For example, when some school children were drowned in a boating accident in Lyme Bay<sup>76</sup>, it was a tragic but not necessarily exceptional fatal accident. However, it gave rise eventually to not only a regulatory regime but even a new regulatory institution<sup>77</sup> with oversight of school adventure trips. This was seen as an example of bad regulation by the Better Regulation Commission (BRC), successor to the Better Regulation Task Force as a body of independent experts providing external challenge to the UK government on how it regulated. Both bodies had been set up by Prime Minister Blair as part of the “Better Regulation” agenda. The BRC chose this issue of regulatory over-reaction as a study and published “Risk, Responsibility and Regulation: Whose Risk is it Anyway?” in 2006<sup>78</sup>. It popularised the issue and became known simply as “The Risk Report”. It contained a selection of examples – such as Lyme Bay – which made compulsive reading as a litany of government stupidity. However, it was weaker on analysis of the issue and on proposals for countering it.

### A. The Risk and Regulation Advisory Council’s Experience

On the succession of Gordon Brown as Prime Minister in 2007, the BRC was wound up but part of its membership (including its Chair) were given an 18 month project to carry out deeper analysis of the issue and come up with practical proposals for tackling it. The project was to be carried out by a temporary body called the Risk and Regulation Advisory Council (RRAC)<sup>79</sup>. The RRAC was formally established in January 2008 with a remit to:

- work with Ministers and senior civil servants to develop a better understanding of public risk, and how best to respond to it, through a series of workshops which consider both good and poor practice;
- work with external stakeholders to help foster a more considered approach to public risk and policy making; and
- be available to Ministers who may seek advice on particular issues from time.

It coined the term “Public Risk” and defined it as “*those risks that may affect any part of society and to which government is expected to respond*”. It was defined by reference to public anxiety therefore the content could be anything. The essential problem was seen as being how to help Ministers respond to heightened public anxiety over a tragedy without producing bad regulation. It was seen by the RRAC as a political phenomenon, rather than a sociological one. “Public Risk”

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<sup>76</sup> <http://www.independent.co.uk/news/uk/the-school-canoe-tragedy-canoe-instructors-were-not-qualified-teachers-no-official-checks-on-centres-offering-activity-holidays-1499567.html>

<sup>77</sup> The Adventure Activities Licensing Authority, now part of the Health and Safety Executive - <http://www.hse.gov.uk/aala/index.htm>

<sup>78</sup> [http://webarchive.nationalarchives.gov.uk/20100623194820/http://archive.cabinetoffice.gov.uk/brc/publications/risk\\_report.html](http://webarchive.nationalarchives.gov.uk/20100623194820/http://archive.cabinetoffice.gov.uk/brc/publications/risk_report.html)

<sup>79</sup> <http://webarchive.nationalarchives.gov.uk/20100104183913/http://www.berr.gov.uk/deliverypartners/list/rrac/index.html>

was a Political Hazard. Consequently, the risk to be managed was – or at the very least included – the political risk, rather than the actual risk, if any, presented by the tragedy.

The RRAC applied a systems thinking approach to the phenomenon and produced “The Risk Landscape”<sup>80</sup>, a systems map of the range of actors who might be involved in a situation of high public anxiety. Different actors had different incentives in amplifying risk perceptions or in trying managing these perceptions. Ministers and officials were only two out of 15 “Risk Actors”, which included the Media, Standards Setters, Insurers and Regulators. The RRAC focused on four case studies and followed through the systems mapping approach in each<sup>81</sup>. It also commissioned a significant amount of research and it has left a rich archive of material on “Public Risk”. However, it never gained traction with either Ministers or officials and its final report – “Response with Responsibility: Policy-making for public risk in the 21<sup>st</sup> century”<sup>82</sup> - was published in May 2009 at the tail-end of an outgoing government. The incoming government showed little interest in its findings. However, it directly inspired<sup>83</sup> the Dutch Risk and Responsibility Programme, which has undoubtedly been its main legacy (Burgess and Macrae 2012).

## B. UK Institutional Framework for Risk and Policy-making

Policy-making in the UK is a combination of activities by both officials and Ministers<sup>84</sup>. Methods of managing the RRR in the work done by officials will not necessarily manage it in respect of Ministers but other institutional barriers can limit decisions by Ministers as well.

### i. Policy-making at official level

The UK prides itself as having been in the forefront of “evidence-based policy-making” (EBPM)<sup>85</sup>, as opposed to relying primarily on political intuition and responses to short term political pressures. The latter is where the RRR is at its most dangerous and so EBPM ought to act as a counter-balance. This approach has been institutionalised through express acknowledgement of Science as being as much a part of a policy team as Law, Statistics or Economics. Each UK Ministry has to have a Chief Scientific Adviser and they form a network<sup>86</sup>, reporting to the Government Chief Scientific Adviser in the Government Office for Science. They will have similarly senior grades compared with the Legal Adviser or Chief Economist and will oversee a Science Strategy

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<sup>80</sup><http://webarchive.nationalarchives.gov.uk/20100104183913/http://www.berr.gov.uk/files/file51457.pdf>

<sup>81</sup> One of the RRAC’s concerns was the erosion of personal and community responsibility through central government taking responsibility for any tragedy. The UK public was increasingly expecting people in authority to solve all their problems and provide zero risk. The Communities workstream foreshadowed many of the elements of “Big Society” which was an important policy of the incoming government but the RRAC’s work was not built on.

<sup>82</sup><http://webarchive.nationalarchives.gov.uk/20100104183913/http://www.berr.gov.uk/files/file51459.pdf>

<sup>83</sup> An Anglo-Dutch seminar was held in London on 25 February 2010, which formed the connection between the two programmes – see <http://crisislab.nl/?s=anglo+dutch+seminar> for a reference and a copy of the report.

<sup>84</sup> In the UK system, Ministers are elected politicians from the Party with a majority who are appointed by the Prime Minister as Ministers. They remain constituency MPs and are accountable to their constituency electorate.

<sup>85</sup> For an early history, see

<https://www.kcl.ac.uk/sspp/departments/politiceconomy/research/cep/pubs/papers/assets/wp1.pdf>

<sup>86</sup> <https://www.gov.uk/government/publications/chief-scientific-advisers-and-their-officials>

tailored to the Ministry. Their function is not only to ensure that policy-making is based on good science and on evidence but also to manage the complex task of acquiring the evidence. EBPM is a simple principle but “evidence” has to be specific to the issue and may need to be commissioned, through surveys or research, working with academia, consultancy firms and practitioners. This often leads to vested interests, disagreement on concepts or standards, incompatible time perspectives and significant costs<sup>87</sup>. The primary problem as it affects the RRR tends to be timescale. For a slow-burn issue such as climate change, proper research can be commissioned and given time to work through but the RRR always has an element of urgency. If the evidence is not readily available, there may not be time to acquire it<sup>88</sup>.

In addition to trying to mainstream science into policy-making, the UK has also placed a great emphasis on risk assessment and management, which should also be an integral part of EBPM. The UK developed a National Risk Register<sup>89</sup> and has recently made it publicly available, in order to raise awareness of serious risks and actions that could be taken by businesses and by individuals. Also published is the National Risk Assessment, updated on an annual basis. The risks include impact of severe weather, especially flooding, but also terrorist attack. This could be used as a perspective to ground anxiety when there is an overreaction to a specific and localised tragedy but there are no cases reported when this has been done. Presumably, politicians fear that they would be seen as callous and dismissive by comparing it negatively to a national crisis but part of the issue in the RRR is where responsibility for response is taken at national level when it should be left at a more local level. National level responsibility should be for national level hazards and the availability of a National Risk Register does then provide a possible framework for assessing both response and responsibility.

A recent development in UK policy-making since 2012 has been the “What Works centres” . These are a form of evaluation of policy interventions, used as feedback into further intervention. There are six so far and they are all based on a successful model first seen in NICE, the National Institute for Health and Care Excellence. This is a UK example of a limited number of bodies that have the trust of the public, such as the US NTSB – National Transportation Safety Board or the Washington State Institution for Public Policy. These centres look at the effectiveness of the policy intervention ex post through rigorous evaluation. This is a useful counter-balance to the ex-ante assessment of Regulatory Impact Assessment (RIA), which in the UK is dominated by cost-benefit analysis rather than by an assessment of likely effectiveness. Ex post evaluation is rare in UK policy-making therefore the development of the What Works centres is a significant change.

This it can also be seen as a variation on the idea of a “Council of Elders” or “Council of Experts” that is sometimes proposed as an answer to the RRR, whereby the issue of what action to take to

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<sup>87</sup> For a critique of EBPM by the Institute of Economic Affairs, see <http://www.iea.org.uk/in-the-media/press-release/%E2%80%98evidence-based%E2%80%99-policies-are-damaging-uk-policy-making>

<sup>88</sup> The public seems content to wait for evidence from air accident investigations and even continue flying well before any conclusions are reached yet in the first cases of Avian ‘Flu, there was excessive pressure on Ministers to announce within hours whether the strain was H5N1, despite the fact that the EU reference laboratory (which happened to be in the UK) tests took five days.

<sup>89</sup> <https://www.gov.uk/government/publications/national-risk-register-for-civil-emergencies-2013-edition>. The risk assessment is at <https://www.gov.uk/risk-assessment-how-the-risk-of-emergencies-in-the-uk-is-assessed>

respond to the tragedy is referred to objective, scientific experts. Such proposals have usually been rejected, partly because of the difficulty of establishing a body whose expertise is sufficiently wide to cover enough of a range of issues but more fundamentally because politicians usually do not want to hand over that amount of power to an unelected body. In contrast, an air accident investigation team presents neither problem as its expertise is quite precise and any recommendations will be highly technical. The What Works centres may provide the expertise, plus have public trust, and also work in retrospect, rather than initiate interventions.

## ii. Policy-making at Ministerial level

No matter how many constraints there may be on officials in how they develop policy options, they can always be overridden by Ministers. This is especially the case with the RRR, which is perhaps the classic case. But the UK has developed – since the time of the RRAC – institutional measures to override Ministers.

The Regulatory Policy Committee (RPC)<sup>90</sup> was a further reincarnation of the BRTF / BRC / RRAC bodies, with a few members of the RRAC moving across and taking with them a weakened remit on Public Risk which was never really developed by the RPC. It is a body of independent experts providing external challenge to the regulatory process. All significant regulation has to be reviewed by it, including primary legislation, secondary regulations and, very recently<sup>91</sup>, voluntary regulatory instruments such as a Codes of Conduct. This is a very comprehensive review mechanism, especially compared with the US version, which misses the stage of primary legislation.

The RPC oversees the operation of a system of “regulatory budgets”, whereby the claimed costs and benefits of all the proposals in the regulation are assessed by the RPC for validity. In order to create a budgetary system, any overall increase in the costs of the new regulation must be offset by costs in another regulation from that same Ministry which is to be repealed. This system of “One In, One Out” became established sufficiently for the government to increase it in 2013 to “One In, Two Out”, whereby a new regulation must show overall savings of twice its costs through repeals. The calculations are not simply on number of instruments or pages or obligations but on a cost benefit analysis of all the specific measures. The RPC check both the “Ins” and the “Outs” and have sometimes given a red flag to a proposal because the costs claimed for the “Outs” were inadequate.

In its first year of operation, the RPC assessed 44% of RIAs as not fit for purpose<sup>92</sup>, which forced Ministries to take it seriously. Its assessment is sent to the Reducing Regulation Committee (RRC), a Ministerial committee that has the final say on whether a proposed regulation will proceed. On rare occasions, the RRC will override a red flag and allow a proposed regulation to proceed, as a political judgement. A key part of the success of the system as a form of gate-keeping is the

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<sup>90</sup> <https://www.gov.uk/government/organisations/regulatory-policy-committee>

<sup>91</sup> <https://www.gov.uk/government/news/expanded-role-welcomed-by-rpc>

<sup>92</sup> <https://www.gov.uk/government/publications/rating-regulation-rating-impact-assessments-at-page-3>, where an improvement is announced, falling from 44% not fit for purpose to 31%.

discipline of the RRC, as much as the expertise of the RPC, in being prepared to reject proposals at a political level.

The biggest weakness of the RPC system is its exclusive focus on cost-benefit analysis. There is no check on the actual assessment of impact or effectiveness of the proposed intervention beyond what is claimed as costs and benefits. That is where the counter-balance of the What Works centres is a promising sign. In terms of the RRR, any unwise promises to the public made by a politician in immediate response to a tragedy will still need to go through this process before it can become adopted as regulation, provided it passes the threshold. It will require a full RIA, including the “Do Nothing” option plus at least another two, each being costed.

With this system, we may see a separation of “response” from “regulation” since promises made at the scene of the tragedy are unlikely to survive the regulatory process. The system also strengthens the hand of the officials since they have then to develop the RIA and the costings. This allows EBPM, scientific advice and risk assessment to be applied, even if there is still urgency that might dilute how thoroughly it might have otherwise been done.

If the “concern assessment” approach advocated by the IRGC model (Macrae 2014) were then applied to the RIA process in developing an assessment of political impact, the UK could have created a complex framework of practice and institutional design that would make the RRR difficult to translate into actual regulation. However, the RRR itself deals with the response to the tragedy, which is the “reflex” element, and that remains a political issue, even if there is much less chance of bad regulation resulting.

## C. Leadership, Influence and Trust

### i. Crisis management

The RRR is strongly connected with Crisis Management, insofar as it tends to occur in a crisis situation. However, for some politicians, a crisis is an opportunity and they may escalate what might not otherwise have been a crisis into one. A tragedy is not necessarily a crisis but rather a traumatic event, such as a railway crash, which leaves many people dead. It is not a crisis insofar as it is a one-off. In contrast, the terrorist bombings in London in July 2005<sup>93</sup> was a genuine crisis, with a series of bombings, which left a real uncertainty about what would happen next. In the case of the one-off tragedy, a simple statement of compassion may be a sufficient political response but the London bombings required political leadership. They did not require solutions or proposals for action because the situation was still unfolding. Compassion would not have been enough. But action was needed because there was a real likelihood that the transport systems would grind to a halt for the sake of safety checks. The Prime Minister’s simple statement “London remains open” was a call for normality and “business as usual”, rather than a panic about safety. That was an attempt to de-escalate the crisis, rather than play it out.

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<sup>93</sup> [http://news.bbc.co.uk/1/shared/spl/hi/uk/05/london\\_blasts/what\\_happened/html/](http://news.bbc.co.uk/1/shared/spl/hi/uk/05/london_blasts/what_happened/html/)

## ii. Institutional independence vs. political interference

The UK has also tried to remove some subjects out of the political arena. The leading example is the Food Standards Agency<sup>94</sup> which is a “Non-Ministerial Department”, i.e. a Ministry but without a Minister. It was set up in this way as a reaction to the BSE crisis at the end of last century, when the public had lost trust in both the food industry and politicians. The FSA’s remit was to act as the champion of the consumer, rather than the producer. In place of a political leader, the FSA has based its authority on good science<sup>95</sup> and this has resonated with the public, leading to a significant degree of trust in what the FSA says in response to food scares. It has been highly critical of the food industry and its early years involved a policy of “naming and shaming” producers whose products were dangerous. A strong indicator of its level of influence over consumers is its success in a campaign to reduce the amount of salt in processed food. There is no legislative provision for acceptable levels of salt but there is a large body of scientific evidence that too much salt is harmful<sup>96</sup>. Although it was unable to require processors to reduce levels of salt, its campaign led to consumers themselves choosing products with lower salt levels, which gradually forced the processors to reduce the salt content. The UK has seen significant reductions in salt consumption and improvements in health as a result<sup>97</sup> but it also led to strong opposition to the FSA from the food industry. When a new government came to power, there were plans announced to abolish the FSA<sup>98</sup> but that was later converted to removing some of its functions. Although there will be controversies over food, the UK has seen little in the way of full-blown “food scares” in the last five years.

## iii. Building trust and scientific credibility to avoid the RRR

The UK’s Department for Environment, Food and Rural Affairs (Defra) also has a history of crisis management, given that it is responsible for two of the most serious risks in the National Risk Register – pandemics, such as Avian ‘Flu, and flooding. Around 2005, Defra decided to use scientists rather than politicians to lead on public statements about matters of public anxiety. The chief concern was Avian ‘Flu and it was the Chief Vet, rather than the Minister, that gave Press conferences. This was linked also to maximum transparency in news of any impending threats, including publishing data and scientific reports, such as the migratory paths of wild birds. It is interesting to contrast the debacle in handling an outbreak of Foot and Mouth Disease (FMD) in 2001 and another outbreak in 2007. The 2001 incident led to the destruction of over 10 million animals, with high levels of publicity that ruined the rural economy in parts of England and also led to the abolition of the then Agriculture Ministry and the formation of Defra<sup>99</sup>.

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<sup>94</sup> <http://www.food.gov.uk/>

<sup>95</sup> <http://www.food.gov.uk/news-updates/news/2014/13066/fsa-annual-science-report-published>

<sup>96</sup> <http://www.who.int/mediacentre/news/notes/2014/salt-reduction/en/>

<sup>97</sup> <http://www.actiononsalt.org.uk/news/Salt%20in%20the%20news/2014/126738.html>

<sup>98</sup> <http://www.theguardian.com/politics/2010/jul/11/food-standards-agency-abolished-health-secretary>

<sup>99</sup> See the Anderson “Lessons Learned” Review - [http://www.epcollege.com/EPC/media/MediaLibrary/Knowledge%20Hub%20Documents/F%20Inquiry%20Reports/Anderson-FMD-Review\\_Part1.pdf?ext=.pdf](http://www.epcollege.com/EPC/media/MediaLibrary/Knowledge%20Hub%20Documents/F%20Inquiry%20Reports/Anderson-FMD-Review_Part1.pdf?ext=.pdf)

In 2007, there was a further outbreak but it was quickly contained and eradicated. At around the same time, there were cases of Avian 'Flu and of Bluetongue disease, yet there was no media hysteria. Defra had become adept at handling public anxiety and avoiding the RRR (and was also much more effective in handling outbreaks of animal disease). In large part, this was due to the emphasis on science and evidence, rather than politics and sensationalism.

In early 2014, Defra was again in the spotlight when disastrous flooding struck across southern England. The media storm in that case switched from the policy Ministry to the Environment Agency, the regulatory agency responsible for flood defences. Politicians still weighed in, including some inter-Ministerial friction over criticism of the EA , but the EA was allowed to get on with the job without politicians taking over.

#### **iv. Regulatory Delivery**

Finally, part of the UK's approach to better handling public risks is the way implementation of regulations is being transformed as part of the "Better Regulatory Delivery" undertaking. This is covered further in this report in chapter 8 (inspections and enforcement).

## 6. Regulatory Governance Systems and the Risk Regulation Reflex – strengths and limits of better regulation principles and RIA mechanisms when faced with intense political pressure

### A. Better Regulation Principles and the Risk Regulation Reflex

Even though the Risk Regulation Reflex is a relatively novel way of putting a label on the problem, and the understanding of issues related to risk, regulation and public policy has developed in recent years, the fundamental principles aiming at preventing inadequate RRR decisions have been around for around twenty years already.

In 1995, the OECD adopted recommendations on improving the quality of government regulation (OECD 1995), which featured a checklist including the following points (out of 10 in total):

- Is the problem correctly defined?
- Is Government action justified?
- Is regulation the best form of Government action?
- Do the benefits of regulation justify the costs?
- Have all interested parties had an opportunity to present their views?
- How will compliance be achieved?

In 2005, the OECD published an updated set of *Guiding Principles for Regulatory Quality and Performance* (OECD 2005), which were broader and more “systemic” in nature. The second principle stated: “Assess impacts and review regulations systematically to ensure that they meet their intended objectives efficiently and effectively”.

That same year, APEC and OECD released an *Integrated Checklist on Regulatory Reform* (OECD-APEC 2005). Several of the checklist’s points are, again, relevant:

- B2 Are the legal basis and the economic and social impacts of drafts of new regulations reviewed? What performance measurements are being envisaged for reviewing the economic and social impacts of new regulations?
- B5 Are there effective public consultation mechanisms and procedures including prior notification open to regulated parties and other stakeholders, non-governmental organisations, the private sector, advisory bodies, accreditation bodies, standards-development organisations and other governments?
- B6 To what extent are clear and transparent methodologies and criteria used to analyse the regulatory impact when developing new regulations and reviewing existing regulations?
- B7 How are alternatives to regulation assessed?

Such lists of principles are not exempt of some contradictions or at least tensions – in particular between the incitations to have a whole-of-government, somewhat “top-down” approach aiming at reaching “optimal” efficiency, and the importance given to consultation of all stakeholders. Rightly or wrongly, many also suspect such principles, and the organizations that promote them, to have a de-regulatory bias (Carroll 2006). But it remains nonetheless that there is growing agreement internationally on most of these principles and approaches, and that they appear conducive to forming and adopting policies that deliver better results for the society. And apparent contradictions should be seen more as tensions between the different aspects of good

policymaking, and reminders that there is a fundamental element of consensus building and reconciliation of opposing viewpoints.

In order to prevent RRR policies from being adopted, the 1995 checklist still is fundamentally adequate – if we add “RRR specific comments” it would look as such:

- Is the problem correctly defined? *In particular: is this really a systemic issue, or did the incident happen in spite of the underlying system being fundamentally sound?*
- Is Government action justified? *If the incident was not a one-off, low-probability event, but the indication of a systemic problem – is it serious enough? And is there really a “market failure” such that there is no way private actors could address it (or would do so at much greater cost)?*
- Is regulation the best form of Government action? *In the RRR context, this can become: is the proposed policy (regulation, enforcement, allocation of resources etc.) the most effective and efficient form of action?*
- Do the benefits of regulation justify the costs? *And: is it likely that the proposed policy will really achieve the claimed benefits?*
- Have all interested parties had an opportunity to present their views? *Or was the regulation or policy rushed through on an “impulse” decision?*
- How will compliance be achieved? *Is the proposed policy realistic?*

It is thus clear that the principles allowing to address inadequate policy decisions based on the RRR have been clear for around 20 years, and agreed upon (at least notionally) by all OECD member countries. The difficulty lies in translating these principles into practice. We will look first in detail at an instrument that has been privileged by the OECD itself and by many reformers, Regulatory Impact Assessment (RIA) – and will then consider more briefly whether such “principles” could effectively be backed up by judicial or constitutional review.

## **B. Regulatory Impact Assessment – Relevance, Strengths and Limitations**

Under a variety of names, over the last 40 years or more, regulatory impact assessment methods and tools to assess proposed regulations have been developed and have spread in ever more countries. Some of the earliest examples were recorded in Denmark from 1966, and in the United States in the early 1970s (with a relatively narrow focus). The United States were probably the first to put in place a fully formalized RIA system, in successive steps from 1978 to 1981 (Wiener 2006). Canada did likewise in 1978 and 1986; Australia has had a RIA system since 1985 (though in both countries it got considerably strengthened in the late 1990s) (OECD 1997). The United Kingdom started doing Business Compliance Costs Assessments in 1985, and full RIAs became mandated in 1998.

In the Netherlands, a form of impact analysis has also been in place since 1985, but the system only quite recently formalized into a “strict” RIA system. Until the last couple of years, RIA in the Netherlands was based on a system of “checklists” that ministries proposing new regulations were expected to use in order to screen these proposed new rules – Business Impact Assessment, Environmental Assessment, a Practicability and Enforcement Assessment, and a Cost-Benefit Analysis. was a “quality check” on these, but no real system to “push back” if the proposed regulations were found to be less-than-satisfactory from a benefits-cost standpoint or another of

the RIA criteria (Radaelli 2007). This system also did not apply to budget laws, laws of parliamentary initiative, ministerial regulations, and regulations issued by local authorities.

The RIA system is, however, not the only way the Netherlands screen and review regulations. The “administrative burden reduction programme”, in successive iterations, has proven successful at reducing the cost of “information obligations” and of regulations more broadly (Radaelli 2007, OECD 2009, World Bank 2007 and 2010). This programme has been strongly centrally driven and monitored. But this is mostly an *ex post* system, and one that looks only at some salient aspects of regulation, and primarily from a cost angle. However successful, this program does not have the ability to effectively prevent RRR decisions from taking place. In addition, the Netherlands have long had an independent board looking at regulatory burdens (Actal), as well as in depth investigations by the Court of Audits, but both of these are, again, *ex post*, and once a public policy mistake has been done, it is not always easy to correct.

### i. The situation with RIA in the Netherlands

All reviews of the Dutch better regulation system (OECD 2009, World Bank 2007 and 2010) have emphasized its successes at reducing administrative burden from existing regulations, and the quality of some elements of its semi-structured RIA, but also how much it could stand to gain from introducing a full-fledged RIA system with stronger centralized oversight, that could act as a “gatekeeper” and protect against bad regulation. Though the RRR can involve many policy responses that go beyond “regulation” *stricto sensu* (resource allocation, enforcement approaches etc.), such a system, if it were to be fully effective, would seem to have the potential to help protect against harmful “reflex decisions” in a number of cases.

In 2011, the Netherlands’ Government introduced a new system for RIA (*IAK: Integraal Afwegingskader beleid en regelgeving*), with quality control conducted by the Ministries of Justice, Economy and Internal Affairs (each on their own field of competence), based on a set of officially adopted criteria, and on a list of seven questions that match the generally agreed upon “RIA approach”. These seven points are: justification for the proposal, stakeholders involved, problem being addressed, purpose of regulation, justification for government intervention, choice of most adequate tool, foreseen consequences and effects. Since January 2014, publication of consultations on proposed new regulations is mandatory (<http://www.internetconsultatie.nl/>), which considerably improves the transparency of the process. Improving consultations and strengthening their role in the rule-making process is in any case a useful tool of better regulation and tends to improve the outcomes, both by ensuring that all stakeholders are heard, and by somewhat “slowing down” the process and thus giving more “breathing space” between the initiative and its conclusion (see e.g. Ottimofiore and Blanc, forthcoming 2015).

It is still early to tell how well the new RIA process is working, and how effective it is. Anecdotal evidence suggests that the level of compliance with the established standards is low, and that assessments are often *pro forma*. Impact assessment is mostly seen as a burden, a limit on legislative initiative. While this may improve in the future, experience from other countries suggests it will only happen if there is serious attention to this issue. Also, as was the case before 2011 already, the rules only apply to legislation that originates with the central government – hence it covers neither municipalities and other local authorities, nor parliamentary initiatives. Lower level secondary legislation (ministerial or agency-level decisions) is also not covered. Enforcement decisions and instructions definitely fall out of it.

These are very important exclusions that mean that many RRR decisions would in any case not be affected at all by the *IAK*. In order to estimate what could be the system's overall effectiveness on at least reducing or mitigating RRR-type situations, we can look at international experience in this field – which can then point to lessons that could potentially be used to improve the RIA practices in the Netherlands.

## ii. Lessons from two RIA systems: the United States and Australia

Given the number of RIA systems around the world, and the many studies written about them, it would be outside of our scope to review them all. In order to investigate the specific usefulness and effectiveness of RIA in tackling RRR issues, we will look at two particularly “strong” examples, that have been showcased by repeated studies (OECD 1997, OECD 2004, Jacobs 2006) as among the “best practice” in terms of RIA: the United States (the oldest and most established, but also a very specific case given the Presidential regime) and Australia (in a somewhat more “typical” Parliamentary regime context). Let us clarify: by saying “best practice” here we do not mean to pass judgment on whether these RIA systems have really been effective at improving regulatory outcomes, reducing administrative burden, strengthening competitiveness etc. While there are a number of studies that purport to do so, there are many complexities involved in this evaluation, and it is likely to remain an open topic at least until such systems have existed long enough, and many more studies have been conducted (see Harrington and Morgenstern 2004, Campbell 2006). We also do not mean to dwell on the quality of the analysis and in particular of the scoring of the cost-benefit analysis, a topic which is of particular complexity, and again has been covered in many studies (same and also Wiener 2006)

For the purpose of this report, we do not need to have full certainty on the overall impact of RIA in economic and social terms – we just want to investigate whether it can help address the RRR problem. Since, within the parameters of what is considered by its proponents to be a “good RIA”, the US and Australian systems are mostly considered “good practice”, we can look at these two as adequate examples of what can possibly be achieved in terms of RRR mitigation through RIA.

### a. United States

In the United States, the Administrative Procedure Act (1946) has established the consultation and review system for all regulations issued by the executive branch, and RIA was embedded as a fundamental part of this rule-making system through the Regulatory Flexibility Act (1980) and successive Executive Orders (1978, 1981, 1985, 1993, 2011 etc.) (see Wiener 1986). The RIA process is centrally supervised by the Office of Information and Regulatory Affairs (OIRA), under the Office for Management and Budget (OMB). RIA applies to all regulations issued by federal agencies except when specifically excluded by Congress. It is mandatory, has to follow strict guidelines and criteria, and compliance by agencies is subject to judicial review. Even though there may be controversies or at least discussions on the quality of the impact assessments, and on the overall effect of the system, there is no doubt about the formal compliance, and the fact that it introduces a significant delay in the process of adopting new regulations. This does clearly limit the possibility of adopting “knee jerk” RRR-based rules, as there will be several months of consultations and consideration before adoption, and judicial review is possible in case this process is circumvented or done only *pro forma*. Again, while it is difficult to ascertain the average

quality and impact of RIAs, case studies suggest that they have clearly contributed to raising awareness about the issues at hand, forcing consideration of alternatives, and resulted in generally higher quality of regulations (Harrington and Morgenstern 2004).

The RIA process in the US has, however, fundamental limitations. First, it does not apply at all to primary legislation: all primary legislation in the US originates with Congress, and the RIA system does not apply to it (although the 1995 Unfunded Mandates Reform Act indicates that, if an obligation – “mandate” – imposed on state or local governments, or the private sector, would have costs of more than USD 100 Mln a year, a cost-benefits analysis should be conducted by the Congressional Budget Office – this does not really result in systematic screening and the process is far less formalized and effective than for RIAs for federal executive regulations). Second, it does not apply to state and local governments, except if some of them specifically create similar systems (most of them have not done so). Finally, it applies in any case only to regulations – but not to “homeland security” regulations and other rules on the “criminal law” side (illegal drugs classification etc.). Impact assessment and cost-benefits analysis also do not apply to policy actions that are not “regulations” – like investment decisions, military action, etc. (Wiener 2006).

As we have seen in prior sections, it is precisely in areas where RIA does *not* apply (criminal law, Congressional legislation, counter-terrorism...) that the worst RRR-based decisions have generally taken place in the United States in the past few decades. This tends to suggest both that RIA is to some extent effective (at avoiding out-of-control RRR in the spheres it covers), and that it is too limited a tool to affect the RRR in a broader perspective. Hence, RIA may be considered as *useful but insufficient*.

#### **b. Australia**

In Australia, the RIA system applies to primary legislation (at least as long as it originates in Cabinet, which is the case for most of it), and to both Commonwealth (federal) and state levels. Thus, it potentially captures a far larger share of the policy spectrum. However, RIA only applies to regulations affecting economic activity – again, neither to criminal law or security issues, nor to regulations that would affect only citizens in their private capacity, nor of course to non-regulatory policy actions. This limitation has been pointed out as one of the key shortcomings of the RIA approach, one that both limits its effects, and also its legitimacy and thus public and political support (Carroll 2006).

The effectiveness of the RIA system has been studied repeatedly in Australia, in particular through the 2012 RIA Benchmarking report (Productivity Commission 2012) but also discussed in a number of other studies (e.g. Carroll 2006). What the Productivity Commission report demonstrated quite clearly, through a survey covering RIA implementation and compliance in all jurisdictions of Australia, is the relatively large number of exceptions to the process. Though most states apply RIA requirements also to election commitments, it is only partly the case at the Commonwealth level, and in any case at all levels additional exceptions can be granted (and in only 3 jurisdictions can these exceptions be granted only by the Head of Government – all others have more flexibility). Quoting from the report: “it is generally accepted that certain exclusions, or exclusions in particular circumstances, are necessary and appropriate. However, the large number of proposals bypassing RIA, particularly those that business consider to have more significant impacts, is one of the principal complaints about RIA processes in some jurisdictions”. Information on exemptions granted is also rarely published.

Thus, it appears that the RIA system works only *insofar as there is no overriding political priority*. Election commitments fall outside of it in many important cases, and ministers can push political priorities through exemptions to the process when they want to. As well designed and structured that RIA systems can be, “they are not immune from the exercise of power in the policy process” and “competing political forces” mean that “popularly elected ministers will always vary in their degree of support for such a system, for they are players in that process, acutely sensitive to its demands and constraints” (Carroll, 2006).

Moving from these two examples to a more general take, we can go back to the words of one of the leading proponents of RIA, Scott Jacobs, reminding that “RIA (...) is an adjunct to good decision making” (OECD 1997). He adds that, while RIA is a key instrument in empirical methods for good decision making, “crises in newspaper headlines tend to move decisions toward political methods and away from empirical methods” (*ibid.*).

### iii. Challenges in making RIA more effective – and elements of solution

One last point relevant to our investigation is that RIA systems may become more effective over time, as they become more “embedded” in the overall legislative process, and gain more acceptance throughout society and across all stakeholders. Effectiveness is also likely to increase as government officials in various agencies and ministries become more proficient at conducting RIAs, and as oversight bodies likewise gain more expertise and experience. Indeed, even though RIA systems have, in some countries, been around for a couple of decades (like in the US or Australia), one could argue that none of this system still meets all the “ideal characteristics” of a RIA system (see e.g. OECD 1997), because of various shortcomings – and certainly they often still feel as a relative novelty or exception compared to the general process of legislation.

A key weakness of RIA in most (if not all) jurisdictions is that it never applies to all legislation, and generally only to a minority (legislation affecting businesses, and even this with exclusions). As a result, it ends up feeling to civil servants involving in the legislative process like a “relatively minor appendage” compared to the “normal” process (Carroll 2006).

Finally, another factor that has been seen in many countries to weaken the effectiveness of RIA is formalism. Excessive focus on getting all the documentation right, combined with overflow of regulations to be reviewed (far in excess of available capacity), result in *pro forma* RIAs where “all the boxes are ticked” but the fundamental questions have not really been asked. The “burden” aspect of RIA has resulted in strong resistance towards such systems from civil servants, itself resulting in the system not yielding its expected benefits (see e.g. Jacobs 2005, Productivity Commission 2012, Blanc and Ottimofiore 2015). The most obvious response to this, in order to ensure that RIAs are of high quality at least for the “most important” regulations, has been to try and focus the RIA systems – by building in thresholds of costs and burden below which they are not required, for instance (Productivity Commission 2012). Even though it is possible in principle to combine a wider overall scope for RIA (avoiding loopholes) and more focus (allocating resources to “important regulations”), and there are examples of efforts to this end (Jacobs 2006), there remains a tension between making RIA an integral and “normal” part of policymaking, and using it only in some situations (“focus”).

#### iv. Focusing on RIA's essential features and benefits

One way to possibly, to some extent, reconcile these different contradictions, and address the main limitations of RIA so far, can be to concentrate more on the *essential benefits* of RIA rather than on the formal aspect of the process. From the perspective of avoiding RRR-based policy decisions, and of ensuring that appropriate consideration is given to all the aspects of a given situation, the important aspects of RIA are the correct definition of the problem, the consideration of alternatives, the consultation of all interested stakeholders, and the attention given to implementation, compliance and enforcement issues – as well as some “rough” look at how costs and benefits seem to compare, but without necessarily going through a full, formalized and strictly conducted cost-benefit analysis. Flexibility in tools is in any case advocated by RIA proponents (see Jacobs 2006) in order to address the problem of quantitative analysis being too costly – but our point here goes further. The entire formalization and the nature of RIA as something “imposed” on the normal working procedures of the civil service may be distracting from the more fundamental aspects: checking whether there really is a systemic problem, considering the different alternatives, conducting a “reality check” on the proposed solution, and consulting stakeholders. Many governments indeed seem to consider that the most important aspect of RIA is the consultation phase, which ensures that possible problems are spotted, and that there is wider support for the decision at the end (see Blanc and Ottimofiore 2015).

An approach that can be very relevant to the RRR problem is what J. Wiener calls “warm analysis” (Wiener 2006), which he contrasts to the “cold” cost-benefits analysis. He summarizes it thus: “The crucial task for good public policy is to think through decisions. It is therefore to engage in a structured consideration of the major alternatives and consequences. (...) “Warm analysis” compares pros and cons in a structured decision framework but without limiting the comparison to strictly quantified and monetized impacts”. Such an approach is indeed highly appropriate to RRR situations, where emotions can be intense, and there is a need to acknowledge them adequately regardless of whether they can be turned into numbers, and to look at the situation without necessarily having the luxury of complex econometric calculations.

#### C. Using advisory institutions and judicial or constitutional review to implement principles of good public policy

While RIA can claim for itself a few decades of gradual development and “mainstreaming”, there are other, “older” forms of control that can ensure quality of regulations and keep public policy as much as possible within the bounds of good practice. The most established of these are judicial review of executive and administrative decisions, constitutional review of legislation, and *ex ante* advice on the legality and constitutionality (and to some extent adequacy) of proposed legislation (primary or secondary). These conceptually distinct functions can be to some extent combined: in the United States, the Supreme Court (and the Federal Courts below it) exercise both judicial review and constitutionality review. In France, the Council of State provides advice on legality, and also judicial review for administrative and executive decisions and secondary legislation.

### i. Advisory bodies on proposed legislation

In theory, having a high level advisory body that reviews proposed legislation (primary and secondary) against a clear set of criteria before their adoption (for secondary legislation) or their presentation to Parliament (for primary legislation) can do a lot to ensure quality of legislation, and mitigation of the RRR effect. In practice, it clearly depends on a number of factors: the analytical capacity of the advisory body, its clout and prestige and ability to get its advice heeded, its mandate and the basis on which it provides its advice, and the readiness of politicians to follow its advice (which, in turn, is strongly linked to the other points).

In the case of the French Council of State, it combines a highly qualified (and very prestigious) staff (300 councillors and 390 support staff), a strong sense of its own mission meaning it is unlikely to shy away from criticizing proposed legislation, sufficient visibility to ensure its advice can at least be taken up by the media (even if ministers end up disregarding it). In giving its advice, it considers not only the existing constitutional and legal framework, but the administrative jurisprudence (and the fundamental principles i.e. legal doctrine on which it is founded), international treaties, and the adequacy of the proposed legislation to its stated goals.

The Council may also provide advice to the Government upon request, without a specific draft legislation or decision to consider, but to give its perspective on the interpretation of existing laws in a given situation. High profile examples (e.g. its 1989 recommendation on the right to wear a headscarf at school) suggest it has mostly done so in a way that serves to “cool down” controversies, go back to fundamental principles (in particular individual freedom, right to a normal family life etc.), and thus mitigate the push for immediate government action on “hot topics”. This advisory role thus seems to be a counterweight to the RRR – more or less effective, depending on the situation, and on the politicians’ willingness to engage in such “cooling down”.

Its advice on proposed legislation is mostly given in the same perspective (e.g. its advice on the draft 2010 law prohibiting the “integral veil”, which the Council – unsuccessfully in the end – recommended to relax significantly to be in line with fundamental principles of individual freedom, and also more likely to be effectively enforced). The 2010 example shows that, evidently, if a government is determined to adopt a given policy regardless of the Council’s advice, and can ride on the support of at least a part of public opinion, it will do so and push forward. Such advice can help reduce the RRR, but only if the cabinet actually is also trying to do so.

A last note on this point is that, while the Netherlands’ Council of State (*Raad van State*) shares a number of features with the French one (part of its historical evolution, its dual role as an advisory and judicial body etc.), the *Conseil d’Etat* is vested with significantly more resources, and a stronger “esprit de corps” due to its specific recruitment (consistently attracting the top graduates from the *Ecole Nationale d’Administration*). The principles they are founding their decisions upon are somewhat similar, but the *Conseil d’Etat* draws on its own jurisprudence as a supreme administrative court with judicial review powers (see below), whereas the *Raad van State*’s role as supreme administrative court is both far more recent, and far narrower in scope.

Justice Breyer, in his book *Breaking the Vicious Circle – Towards Effective Risk Regulation* (Breyer 1993) held up the *Conseil d’Etat* as a model, and recommended the set up in the United States of a “small, centralized administrative group, charged with a rationalizing mission”, with a specific “career path”. This group should have “interagency jurisdiction”, “political insulation”, “prestige” and “authority”. All this, to a significant degree at least, the *Conseil d’Etat* enjoys. But the first characteristic that Breyer wanted this group to have was “a specified risk-related mission” – and

this, in spite of its ability to draw on broad fundamental principles in a way that *to some extent* supports rational risk management, the *Conseil* does *not* have. There may thus be the potential to create a more effective structure in terms of RRR-mitigation by drawing on Justice Breyer's vision.

## ii. Judicial and Constitutional Review

It would vastly exceed the scope of this report to expose the different approaches, traditions and experiences on judicial and constitutional review, with the particularly important examples of the United Kingdom, United States, European Union – and of states of the “Continental” tradition such as France or Germany. The mechanisms of judicial and constitutional review are not of interest to us here, but only the principles on which it can be based. In well established review systems, there is ample evidence that judges, justices or members of constitutional courts and councils do not hesitate to invalidate legislation or policy decisions that they deem contrary to the principles they are entrusted to protect.

It has been noted that, in many cases, judges may have limited familiarity with economic issues or modern regulatory principles, and judicial review can tend to err on the side of risk aversion – as Wiener (2006) puts it, judicial review is “non-expert and not politically accountable, and may distort or ossify regulatory policy”. In some cases, judges and justices may rule in a risk-averse manner because the statutes on the books do not give them any flexibility to rule otherwise (see Wiener 2006, Eliakim 2013, for examples in the United States and France). In other cases, and indeed frequently, the “leaning” of judicial review decisions will depend on the body of principles that they are entrusted to protect, in particular by the constitution. Since many constitutions adopted in the second half of the 20<sup>th</sup> century are particularly protective of what one could call “social” rights (health, labour etc.), for instance, courts in such countries are likely to often take decisions that go against reforms in these sectors, regardless of their policy merits, and will pay far less attention to economic considerations (competition, consumer choice, growth etc.) if these are not similarly enshrined in the constitution.

By contrast, the introduction in law of a “growth duty” for regulators through the United Kingdom's 2014 Regulators' Code means not only that regulators, when taking decisions e.g. on enforcement will have to consider not only their primary duty (protecting the environment, health etc.) but also the impact of the decision on growth and jobs. It also means that any judicial review of these regulators' decision will have to give consideration to the same.

Judicial review can look not only at whether a policy decision or regulation complies with fundamental norms and principles, but also at whether it was adopted in conformity with mandatory process rules. In the United States, for instance, compliance with formal elements of the Administrative Procedure Act is strictly controlled through judicial review (e.g. publication for comments for the appropriate period, summary of and response to comments etc.) – but, as many have noted (e.g. Wiener 2006), courts are mostly unable to assess whether a regulatory agency has complied *substantively*, i.e. if its RIA was of adequate quality, for instance. While one could imagine that this may change in future, with judges more aware of cost-benefit analysis methods (for instance), considering the many other issues the same judges have to rule upon, it is unlikely that they would ever really be in a position to engage on the substance. Rather, if one wants to make use of judicial review of compliance with processes, simple and straightforward rules and criteria are needed.

Both elements (norms and principles, process rules) could potentially be used to help address RRR situations. On the norms and principles side, the relevant one is *proportionality*. On the process side, mandatory delays and consultations for consideration of regulatory proposals (and possibly of policy proposals more broadly) could be introduced (along the lines of the United States' Administrative Procedures Act).

#### *a. Proportionality*

The principle of *proportionality* exists in a number of constitutions (and legal doctrines), e.g. the German constitution and the German and French administrative doctrines, and very prominently in the European Union treaties and case law (Harbo 2010, Sauter 2013). This principle is not undisputed, and is absent for instance of the United States' Supreme Court doctrine (Harbo 2010).

While some scholars are very critical of both the principle, and its (inconsistent) application and interpretation by the European Court of Justice (Harbo 2010), others point to the potential usefulness of the principle by using a combination of "reasonableness" yardsticks. The fact that the ECJ uses different "tests" of the principle (Least Restrictive Measure in some cases, "not manifestly disproportionate" in others (Sauter 2013).

In the context of the RRR, the summary that Sauter gives of the application of the principle for the review of EU legislation is very useful – he sums it down to four points that allow to consider that a measure meets the test:

- “1. an appropriate (or suitable) measure
2. in pursuit of a legitimate objective (legality – this is sometimes not counted as a separate step in the test)
3. and among the appropriate measures that which constitutes the least restrictive effective means (LRM)

Finally under *proportionality* in the strict sense comes the balancing test. (...)

4. not manifestly disproportionate in terms of a costs versus benefits balance .”

(Sauter 2013).

Quoting the ECJ *Fedesa* (1990) decision: “By virtue of that principle, the lawfulness of the prohibition of an economic activity is subject to the condition that the prohibitory measures are appropriate and necessary in order to achieve the objectives legitimately pursued by the legislation in question; when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued.”

The detailed analysis of ECJ decisions shows that there are some inconsistencies, in particular depending on whether Member States or EU decisions are considered, and in which fields they intervene (level of harmonization), whether there is a conflict with fundamental rights etc. Overall, however, the case law of the ECJ shows that the principle has real power and can help in a number of cases to challenge policy decisions that are clearly “risk averse” – while keeping sufficient ability to protect citizens and thus give confidence to the public. The combination of *proportionality* and *precautionary* principles has functioned in a way to balance each other out, and ensure that, though the EU has become somewhat more precautionary over time (and possibly slightly more than the US), the difference is quite small, i.e. any negative impact of the

precautionary principle has been quite limited (see Wiener 2006; Hammitt, Wiener, Swedlow, Kall, Zhou 2005; Wiener and Rogers, 2002).

Thus, the introduction of a “proportionality” principle in both constitutional and administrative judicial review appears to be an interesting instrument when it comes to addressing policy decisions driven by a RRR situation and taken without due consideration to the balancing of costs and benefits, and of different interests and rights.

### **b. Process rules**

The Administrative Procedures Act has proven effective, in the United States, at ensuring that executive branch agencies do not issue any rules without appropriate consultation and at least some consideration of costs and benefits, and other options (there is no check on quality of this consideration, but at least some work has to be done). Introducing a requirement in the constitution (if it were to be applied also to primary legislation) or, barring this, in administrative procedure legislation (applying it then only to secondary legislation and executive and administrative decisions) that new laws, rules, regulations (or decisions affecting third parties) can only be introduced after a consultation period, and following appropriate discussion of alternatives, could serve the same purpose with a broader application, and be an effective RRR-countermeasure.

The obvious argument against such rules would be “emergency situations”, but it would be possible to exclude them (as is the case for RIA in Australia for instance, see Productivity Commission 2012) – however such exceptions would have to be very carefully defined to avoid turning this into a major loophole. Indeed, it is very rare that there are emergency situations where *adopting new laws or rules* is the appropriate response (rather than using existing physical means for action against the emergency, within existing rules). Requiring, for instance, that a state of emergency (or similar) be officially declared to grant the exception could be a possibility. The upside of such a requirement is that it would be relatively straightforward to implement through judicial (constitutional) review, as the US’s APA experience shows.

### **iii. Summary**

There is much that can be done to avoid or alleviate RRR situations by adequate use of the best experience in Regulatory Impact Assessment, advisory bodies, judicial and constitutional review. These are essential tools that allow to turn principles into practice.

In short:

- A well designed RIA system, with a broad scope (covering not only economic regulations but all public policy spheres), more emphasis on consultations and consideration of alternatives rather than formalistic compliance and resource-heavy cost-benefit analysis, and a real effort to promote compliance with the system, can deliver real benefits – even though there may be situations where it gets “steamrolled” by political pressure (induced e.g. by the RRR), the more established the system will be (and the more legitimate it will become by its quality), the more resistance it will provide against such situations. At least, it may ensure that adequate discussion and consultation are seen as a *sine qua non*, even when deeper analysis is not conducted.

- A strong and legitimate advisory body can help “cool off” discussions in RRR situations – provided that it not only has the right institutional position and capacity, but also explicitly a *mandate* to look at balancing and managing risks.
- Judicial and constitutional reviews can be strong tools to address policy decisions made in a RRR context without due consideration to alternatives and adverse effects – but for this to take place, the appropriate principles need to be enshrined in the constitution and/or administrative procedure law. In addition, process rules can be introduced requiring a mandatory consultation period and discussion of alternatives before a decision can be taken.
- None of these tools will fully ensure that no RRR-based policy decision takes place – it is always possible to fulfil all conditions *pro forma* with a decision that has been taken from the start, but it will become far more difficult and less frequent.

## 7. Scientific advice and public policy – a way to potentially mitigate the Risk Regulation Reflex, but not a silver bullet

The use of science in public policy is frequently in the news – at the time of finalizing this report, it once again is, with a controversy over the position of Chief Scientific Advisor to the President of the European Commission. This controversy has boiled over far beyond “specialist” circles (where it triggered a special “symposium” in the latest issue of the European Journal for Risk and Regulation, EJRR – on which we will draw in this section), and got covered for instance in *The Economist* (unsurprisingly, in a way that supports the business associations’ position<sup>100</sup>). The debate only superficially centres on the question of whether the EU and EC should have a “Chief Scientific Advisor” or rely on the network of existing institutions tasked with scientific expertise and advice – it is in fact mostly about the specifics of a given controversy (how to handle Endocrine Disrupting Chemicals, EDCs), and at its core it really is about the balancing of interests and views (a fundamental problem of any democracy and even of any political system more broadly), and on how to interpret scientific uncertainty. These are the points that will interest us mostly here: to which extent, and within which bounds, science can be of help to address or alleviate RRR decisions – and conversely what *not* to expect from scientific advice and expertise. We will *not*, on the other hand, focus on the question of how best to organize this scientific advice in terms of institutional structures, high-level positions etc. This is a topic of real importance, of course, but just as the detailed mechanics of RIA are amply covered in many publications, so is this issue. The specific questions surrounding the role of “Chief Scientific Advisor” are tackled in the aforementioned EJRR issue (see Alemanno 2014, Wilsdon 2014), both in terms of comparisons with similar positions elsewhere (Wilsdon), and of specific problems with the EC’s CSA (Alemanno). On the broader question of how to organize scientific advice and what role it can and should play, much has been written, some more prescriptive (e.g. Ballantine 2005), some more investigative and looking at detailed workings with a view to studying how scientific advice functions in practice (e.g. Bijker, Bal, Hendriks 2009).

A cursory review of developed countries in particular (but even many emerging economies) will easily show that “scientific advice is found almost everywhere in our technological cultures” and that, for many scientific advisory bodies, “the emphasis is on translating the state of scientific knowledge to make it useful for politics and for policy making” (Bijker, Bal, Hendriks 2009). Even though some of the institutions involved in scientific advice go back a very long way in time (like the Netherlands’ Health Council, the *Gezondheidsraad*, which was founded in 1902), there does appear to have been an increase in the reliance on scientific advice in public policy, or at least the push for increased reliance, in the past three or four decades. This can be linked at least in part to major incidents – as a way to react to these not in a “reflex” way, but by improving the adequacy of policies and regulations in particular, through the incorporation of the “best available” science. In the case of the EU, around the mid-90s “amid scandals over industrial safety (Seveso), ‘mad cow disease’, dioxin contaminated food and oil vessels safety, the EU reconsidered the role that scientific evidence could and should play in its decision-making system” (Alemanno 2014). More broadly, the increasing emphasis on scientific advice in policy making can be tied to the increasing

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<sup>100</sup> <http://www.economist.com/news/europe/21636760-are-europeans-becoming-more-hostile-science-and-technology-battle-scientists>

complexity of technologies employed both by businesses and in the private sphere, and the need to take decisions in front of issues where prior experience or a decent education are clearly insufficient guidance.

### A. Fundamental limitations – “science” cannot answer “everything”

The increased reliance on science, part of the broader trend towards more “evidence based” policy making (of which RIA is a particularly characteristic example), is not only the result of technological change, however – and it is also not fully uncontroversial. On a fundamental level, one can argue that founding policy decisions exclusively or primarily on scientific evidence is in itself a major policy choice, reflecting a utilitarian ideology, and not (as it is often presented) a “neutral”, “non-ideological” approach. Very often, in fact, “on contested topics (...) science, values and politics collide”. The “utilitarian” perspective, which would have science be the primary guide for policy choices, and statistically predicted impact on human life the key indicator, has been vehemently criticized from many corners (from, say, the religious right to the radical left) as reductive and as ignoring the role of “higher” (or at least “other”) values in policy choices (for an early example of such criticism, see e.g. Slama 1993). The reason it is essential to remind of this here is that science can in any case not give the answer as to “what should be the right policy” – it can only, at best, indicate *which instruments and specific norms* are likely to be most appropriate *for given policy parameters*. For instance, if safety and health are the policy priorities, smoking bans and all measures against smoking will be welcome. But if individual freedom of choice is considered a higher value, then such bans and policies will be opposed (see Slama 1993). The only things science can say are (a) what the impact of smoking on health is (medicine and biology) as well as, to some extent, (b) what measures and tools are more likely to lead to reduced smoking (behavioural science, psychology, socio-legal studies etc.).

In addition to this fundamental limitation, there are many situations (and indeed, often in the “hottest” topics) where science is simply uncertain. Of course, at its heart, science always includes an element of uncertainty, in the sense that a better understanding of reality may always emerge – but “stronger” uncertainty is what matters here, that which is at stake in issues which are still only imperfectly understood, and where as a result diametrically opposing viewpoints can both claim to be based on “science” (as in the EDCs “controversy”, even though the vast majority of scientists appear to be on one side, i.e. the one that points out the hazards of EDCs<sup>101</sup>).

To summarize, there are several fundamental, intrinsic limitations to what “answers” science can give to public policy issues:

- Science cannot address conflicts between values, or respond which values to prioritize
- When a policy choice is likely to have conflicting impacts on different aspects or indicators, science cannot answer on which one should be given priority
- In fields where important uncertainty remain, it can only give answers which are affected by this uncertainty, i.e. based on probabilities

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<sup>101</sup> The controversies on GMOs would of course be another example, but their complexity and the passions at stake are even greater, and in addition the “scientific arguments” used by both sides tend to show that they (on purpose or not) do not even speak about the same issues – many proponents of allowing GMOs cultivation and sale emphasize studies showing innocuity on human health, but many GMO opponents do not focus on human health effects but rather on the environmental impact.

- Thus in all cases science cannot make choices – scientific advice can, rather, be a “honest broker” or “cartographer” that “helps decision makers to choose wisely between the available options” or at least understanding the implications of different “policy paths” (Wilsdon 2014).

## **B. The specific case of “scientific uncertainty” – dealing with uncertainty, dealing with risk, two different but connected problems**

In many situations that could be categorized under the RRR “umbrella”, science is in fact not fully clear. Whereas scientific issues are not in debate for instance in the *Deepwater Horizon* disaster or in the Foot-and-Mouth crisis (and the questions are only about the proper tools to address technological or epidemiological issues, and trust deficits), they are or were very much openly debated or at least “not fully solved” in cases like the ESB (“Mad Cow”) crisis, or EDCs and the right response to give them.

There is, indeed, a tendency (on many sides) to present scientific opinion or advice as “one” – and to see problems only in terms of ensuring that scientific evidence gets accepted and acted upon. Quoting an influential report on *Enhancing the role of science in the decision-making of the European Union*, for instance (Ballantine 2005), the only limitations it sees to scientific evidence are “policy-makers and decision-makers [being] often unable to make use of scientific advice”, “lack of public confidence in the utility of scientific evidence, particularly in managing risks to human health, which limits its effectiveness”, “difficulties in obtaining ‘independent’ and ‘excellent’ scientific advice” and the fact that “some influential groups<sup>102</sup> do not accept that scientific evidence is an appropriate input”. We contend here that this is an exceedingly restrictive and “technocratic” view, that assumes the answer is clear and beyond doubt, and the only problem are “people” and “politicians” not listening or unable to act upon scientific advice. The reality is far more complex.

### **i. Scepticism is often grounded in major failures in the past**

If many people (or “groups”) show limited trust in what is presented to them as being the state of science, it can be not only because they conflict with their values or “ideologies”, but because past experience has shown the limits of claims of innocuity of technologies based on “science” [regardless of whether or not the claims were indeed based on science or just presented as such].

Chemicals or drugs later found to be highly toxic (and remaining actively toxic for extended periods) remained in some cases on the markets for decades – with both instances of their toxicity having long been known, or of their being originally seen as safe and knowledge of their toxicity only gradually emerging. Infamous cases that have made history in the worst way include thalidomide, which was marketed as perfectly safe for several years in a number of countries, and led to around 10,000 birth defects leading to infant deaths and phocomelia. Diethylstilbestrol likewise was prescribed for three decades to pregnant women in the mistaken belief it would reduce the risk of pregnancy complications and losses – and not only had no positive health effects, but led to cause a variety of significant adverse medical complications during the lifetimes

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<sup>102</sup> Given the make-up of the Steering Group for this report, with many industry representatives, the “groups” are clearly meant mostly to refer to NGOs – but could also be understood more broadly.

of those exposed (in particular genital tract diseases, e.g. vaginal tumours and uterine malformations). PCBs and other chlorinated hydrocarbons were recognized early as toxic due to a variety of industrial incidents, but serious regulation was only introduced nearly forty years after the first studies, in the 1970s. DDT was used for decades before serious attention was given to its adverse effects, which had been hitherto noticed only by a few scientists. Significant campaigning against the massive use of this chemical only started in the early 1960s, after several decades of massive use worldwide. Asbestos and lead, two naturally occurring chemicals, had harmful effects on health that were known in part since ancient times (at least for lead), but serious regulation of their production and use took often decades to be imposed (with the United States only banning lead-based paints in 1971, Europe lagging at least a decade after the US to ban lead in gasoline etc.) – industry associations during this whole time made considerable efforts to resist regulations and try and discredit scientific expertise that showed the hazards caused by these materials.

We have chosen these few examples on purpose, as particularly well known. They have in common massive adverse effects, and the fact that they were marketed as perfectly safe and warranting little or no precaution (thalidomide and diethylstilbestrol were indeed specifically targeted as pregnant women, the most vulnerable population of all). In some cases, active dissimulation was involved – adverse effects were well known and hidden. In others, adverse effects were not really known, but no efforts were made to investigate whether the compound was really safe, and it was intensively marketed as such. They should remind us that, when individual citizens, NGOs or indeed scientists are sceptical about claims of innocuity, they are not refusing “scientific advice” (as Ballantine and others would put it) but showing legitimate caution in front of statements that probably overstate the confidence we should really have in many products’ innocuity. Being sure of the (absolute or relative) harmlessness of chemical compounds that are novel and are being put into massive production is extremely difficult, if not impossible, at least in a short timeframe. Deciding between a precautionary stance and a more “growth oriented” one is a matter of balancing risks, opportunities, and uncertainty – it is a matter on which a rational conversation can be had, and rational people on both sides can disagree. It is not a topic where a simple “scientific truth” can be told and any disagreement should be seen as baseless obscurantism.

## **ii. Openness and transparency are indispensable to build trust**

How, then, can science be used to prevent or mitigate RRR-based decisions? We would argue that the first step is building real trust through transparency, including transparency about uncertainties and disagreements. If we go back to the high-profile case that is the public dispute over the EC’s CSA position, its original job description included “communicate the scientific values on which specific Commission proposals are based in order to enhance public confidence in science and technology, and in general to promote European culture of science and technology widely<sup>103</sup>”. This single item was in itself a mix of unrelated or downright conflicting objectives (building trust, versus “communicating” and “promoting”) – but it did rightly put the emphasis on “public confidence”. One of the most problematic aspects of the CSA’s position was the confidentiality of advice given to the Commission – which, indeed, was neither indispensable nor even conducive to its necessary independence (Alemanno 2014). Rather, an appropriate approach

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<sup>103</sup> Appointment of Chief Scientific Advisor, 5 December 2011, Europa Press Release, available at [http://europa.eu/rapid/press-release\\_IP-11-1497\\_en.htm](http://europa.eu/rapid/press-release_IP-11-1497_en.htm)

would be full transparency, including when there are disagreements between scientific advice and current policy: “if her mission is to strengthen the role of science within the policy process, it is manifest that the CSA cannot and should not do that alone. It is only by rendering public a possible divergence between her advice and the political decision that the CSA’s ontological mission to promote science in government could be accomplished. Of course, this is not to suggest that scientific input should prime over other sources of advice, but that when a tension exists between the two this should be rendered public” (Alemanno 2014).

If scientific advice is to be any use in making public policy more “insulated” from “reflex” situations, it needs to be trusted. However, trust in such advice has been harmed considerably by prior experience (see above), and by what is seen as attempts to push policy decisions that result from choices and prioritizations as “the only choice”. Transparency is needed on what are the uncertainties, the options and the costs associated with each one. Scientific advice should not mean advocating only one policy option, at least in many or most cases, but rather laying out clearly the upsides and downsides of different options. When significant uncertainty is involved, different scenarios should be sketched out, the costs of different options clearly presented, as well as their potential benefits.

If we take an issue like EDCs, simply stating that their risk to human health is “hypothetical at best, possibly illusory, and certainly never scientifically established<sup>104</sup>” appears to be an overstatement that is damaging to the cause being advocated, because in front of the evidence already collected (WHO UNEP 2012, which comes on top of 10 years of research after the first 2002 report), this appears at best as an overstatement, at worst like as fully misleading. It does not ensue that the decision should be an “outright ban” (which Julie Girling is advocating against) – but certainly the policy debate cannot simply be dismissed by trying to disparage or dismiss the findings of what appears to be the clear majority of scientists specialized in this field.

### **C. Effective scientific advice to mitigate the RRR: more open about values and alternatives, broader in perspectives and scope**

An appropriate use of scientific advice to address RRR situations would thus entail:

- Building trust of the public in scientific advisory bodies by ensuring that they are fully transparent in their proceedings, and that conflicts of interest are as much as possible fully excluded, and at the very least publicly disclosed
- Further consolidating this trust by being open about uncertainties and, rather than attempting to narrow down advice to one recommendation only in front of significant uncertainty, sketching out different policy options and their respective upsides and downsides, benefits and costs, both certain and potential
- Through whichever institutional arrangement, ensure that there is a coherent system of high-quality advice, and that adequate expertise is available to provide input into public policy, including in particular in situations of crisis, emergency etc.

In addition, two very important changes could potentially go a long way to building greater confidence in, and support of, scientific advice throughout society and in all of its social, cultural

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<sup>104</sup> Julie Girling in the *Wall Street Journal* on 23 January 2014:  
<http://www.wsj.com/articles/SB10001424052702303947904579336611208924306>

and political corners – as well as contributing to real evidence-based policy in all areas, and not just in business regulation:

- Whenever advice is provided, set forth clearly what are the different values at stake, and if there is any actual or potential conflict between them – acknowledging such conflicts is far more conducive to constructive engagement from all stakeholders with the advice given, whereas denying them by presenting the implicit values that form the advice’s foundation as the only possible approach is creating strong negative reactions<sup>105</sup> (most scientific advice takes it as a given that safeguarding as many lives as possible is the main goal – but there are other values, like freedom or specific religious rules, for instance, that many citizens may see as deserving as much, or more, consideration – in other cases, advice incorporates an implicit “cost effectiveness” element, without discussing the alternatives, etc.).
- Ensure that “scientific advice” is understood not only as input from natural sciences into policy decisions involving technological and natural risks, but also as taking into account social sciences. This means first having social sciences give input into the policy advice on those policies aiming to address technological and natural risks, to ensure that issues related to behaviours, compliance etc. are adequately addressed, and that thus the presentation of policy options and their likely effects is realistic (see Wilsdon 2014). It also means, far more broadly, considering building a similar system of advice to address social issues (crime and “law and order”, poverty etc.), and economic issues. While institutions to this aim may exist in some cases (at least in the economic sphere, like the US’s Council of Economic Advisers), they are in most cases not given as much prominence and consideration as the structures giving scientific advice based on natural sciences. This is of major importance because, as a result, policies in social matters tend to be in many cases based far more on preconceptions and ideologies and far less on evidence. This also has serious implications for the legitimacy of all scientific advice and public support to evidence based policy: as long as it appears to be “cherry picked” and apply only to some issues, it is far more difficult to build broad-based consensus for it<sup>106</sup>.

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<sup>105</sup> A policymaking process where the values and voices of stakeholders are not adequately represented will lose legitimacy – in contrast, procedural justice (irrespective of what the final decision is) will build legitimacy and thus acceptance of the policy decision in the end – see e.g. Maguire and Lind 2003.

<sup>106</sup> At the risk of being somewhat over-simplistic: much (but certainly not all) scientific advice on the risk of different products and technologies may end up showing that risks are acceptable and support broadly speaking “pro-business” policies. Broadly speaking “left-wing” groups tend to be skeptical of scientific advisory bodies as a result. Were scientific advice to also include social issues and social science, a quick look at the prevailing scientific evidence and consensus suggests that it may often result in supporting policies that are supported by these same groups that oppose the “pro-business” policies. By demonstrating that scientific advice and evidence is not “cherry picked” but used throughout all policy areas, it could contribute to broader support and acceptance, based on procedural justice effects (see above).

## 8. Understanding the proper role of inspections and enforcement – a crucial element in fighting back the RRR

As mentioned above, the Netherlands' Risk and Responsibility programme, which led to the definition of the "Risk Regulation Reflex" concept, itself originated from the Netherlands' Inspection Reform programme. This inherent link between reaction to risks and regulatory control and supervision is an important angle for our study, and one of the areas where addressing the RRR is most important. It is also a field where we can find some useful recommendations and examples.

Indeed, when incidents happen, inspectors and inspection services are often among the first to be blamed – and stricter, more frequent inspections very often top the list of RRR-driven requests. When new technologies or practices emerge, inspectors may be the first to notice them – and possibility in some cases to prohibit them. Inspectors are on the "frontlines" of regulation, the main interface between rules and those who have to abide by them (mostly businesses, but also citizens).

In this section, we will look first at the reasons why inspections play an important part in RRR mechanisms – and then at principles and good practices that can help improve outcomes from inspections, both from a "social welfare" perspective, and in terms of economic growth, innovation, personal freedom etc. Crucially, these findings apply to a large extent not only to regulatory inspections, but also to enforcement more broadly, including policing.

### A. Inspections and enforcement: excessive expectations and misconceptions

Most of the difficulties related to inspections and enforcement in a perspective of rational risk management and risk mitigation come from a number of fundamental misconceptions on inspections themselves (their role and methods), and on compliance and safety (and their drivers) – misconceptions that are not only held by many members of the public (as well as "experts", interest groups etc.) but also by a number of inspectors and inspectorates managers.

These misconceptions revolve around the assumption that more inspections and stricter inspections (or more and stricter control, police checks etc.) will mechanically drive higher compliance, and that this will in turn automatically result in higher safety. This assumption in turn stems from a vision of compliance with rules is primarily or exclusively driven by deterrence, fear and rational calculations. It also implies a belief that inspections, checks etc. do not have significant adverse and unintended effects. In turn, this excessive and unfounded assumption that deterrence is the major driver of compliance (and safety) and that inspections and checks are thus the primary tool to be used (and used as much as possible) fosters excessive expectations from inspections – i.e. that they should manage to ensure perfect safety, complete protection from risks in a given field.

## i. Drivers of compliance

A common view underpinning (consciously or not) demands for “more inspections”, “more checks”, “more enforcement” in relation to risk (after an incident or in view of an “emerging risk”) is that people comply with rules only if they are under supervision and there is a realistic threat of punishment for violations. This view is held even more widely and strongly in regard to businesses, which are seen by many as purely profit-driven. Business operators and owners are thus commonly held to be pure rational calculators, only likely to comply if the costs of non-compliance are high, and punishment close to certain. The specific mistrust of businesses is often associated politically with radical left or anti-capitalist views, but the overall belief that people comply only under pressure and supervision is quite frequent in more conservative perspectives, so overall this view of people as reluctant to comply, and of regulation as requiring very strong enforcement to function, is held very widely and across the political spectrum (with different points of emphasis – but a shared foundation).

This view, anchored in a pessimistic view of human nature (and understandably given credibility by the fact that crime and violations seem to be always recurring, and by human proclivity to estimate probabilities from negative experience and not from statistics – see e.g. Benneer in IRGC 2014), has been further reinforced by successive works attempting to model compliance based on neoclassical economics<sup>107</sup>. In these models, compliance is strictly based on maximisation of expected utility. The costs of compliance are weighed against the potential gains of non-compliance, minus the costs of possible sanctions multiplied by the probability of detection<sup>108</sup>. This model offers a convenient formalisation of the commonly held “pessimistic” view described above. The question is whether this model in fact describes observed behaviour accurately.

Two fields of law and regulation have been the object of most studies of compliance and its possible drivers: tax regulations, and interactions with police and courts (“law and order” issues broadly speaking, and not only criminal justice). While there is no comparable set of quantitative studies on other areas (environmental or occupational regulations compliance, for instance), there is good reason to assume that findings from these two spheres can extend to other fields too. Indeed, in neoclassical compliance models, the cost-benefit calculations are assumed to extend to any kind of regulation as well. From our perspective, taxes and “law and order” issues have the benefit of covering very different types of regulations – complex for tax and simpler for “law and order”, applying only to individuals for the latter and also to businesses for the former, etc. That they have been most studied is a function both of their very strong relevance to society (very fundamental fields of state regulation), and of the relative ease with which compliance and non-compliance can be measured (quantitatively in tax, and with simple questions in terms of law and order – whereas environmental or occupational regulations, for instance, would entail many different questions and compliance could be partial, with difficulties in rating it).

### a. Evidence from tax compliance

If we thus accept that we can generalize the findings from tax compliance and “law and order” studies to other fields of regulation, there is very strong evidence *against* the view of people and

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<sup>107</sup> For instance, in the field of tax compliance, the works of Becker (1968), Allingham and Sandmo (1972) and Srinivasan (1973).

<sup>108</sup> This means that a maximal sanction of 1,000 EUR combined with a detection probability of 10% will result in an expected cost of 100 EUR – if the benefit from non-compliance is higher than 100 EUR, the person or business will choose not to comply.

businesses as complying only on the basis of fear and rational calculations. To quote from an important study reviewing and summarizing several decades of research on tax compliance (Kirchler 2007) “empirical research consistently shows that the rational model is not working as neoclassical economics had intended<sup>109</sup>”. Kirchler, in this study, goes through all the conflicting evidence put forward by a number of studies in different countries, some in a laboratory setting, some based on surveys, some others looking at actual tax data. Most show a stronger effect from audit frequency, a few from higher fines (though from a model perspective they ought to be equivalent), some show no effect or an adverse effect (more audits and/or higher fines leading to *decreased* compliance) – and in all cases the effects are small. Among the most interesting findings from our perspective are that “oppressive tax enforcement and harassment of taxpayers seem to increase tax resistance, as does discontent with the delivery of public service<sup>110</sup>” – and that another study<sup>111</sup> “yielded neither a significant audit probability effect nor significant effects of fine and tax rates, whereas trust in the legal system and direct democratic rights proved to be highly significant determinants of tax morale. These findings prove that perceived procedural justice as described above is a crucial determinant of citizens’ voluntary cooperation, whereas in a system perceived as treating citizens unfairly, cooperation must be enforced by coercion”.

Overall, Kirchler summarises the key findings as follows: “there are many explanations of why probability of audits and fines does not have the predicted high effect on tax compliance. First of all, the assumption that taxpayers are trying to avoid taxes if it is in their benefit must be doubted. Various studies in different countries use different methodological approaches to show that a vast majority of citizens are willing to pay taxes and do not seem to undertake economic decisions under uncertainty in order to maximise income. Most taxpayers seem to take for granted the legitimacy of the tax system and its overarching objectives”. Even to the extent that audit probability and fear of punishment do play a role, their effects are mediated by the values of the taxpayers: “individuals generally make poor predictions of the probability of audit and magnitude of fines from tax evasion. Moreover, there is consistency between their sense of a moral obligation to be honest and the tendency to overestimate the chance of being caught”. In short, and even though there appear to be differences linked to other elements of the context (country, tax rates etc.), it seems clear that the probability and severity of punishment are *not* the primary drivers of tax compliance – but rather, that the moral values of taxpayers, and their views on the legitimacy of the tax system and its rules, are the fundamental drivers, to which inspections and enforcement only come as an addition<sup>112</sup>.

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<sup>109</sup> Full quote: “In 1992, Fischer, Wartick and Mark reviewed a bulk of studies directed at learning more about the relationship between probability of detection and compliance behaviour. It appears that the reviewed studies, which employed different methods, generally point in the same direction and strengthen the confidence that increasing the probability of detection will result in less non-compliant behaviour. However, the effect is, if anything, very small. Similarly, while the effect of fines is significant in many studies, their impact on tax compliance in general is small, if not negligible (Andreoni, Erard and Feinstein, 1998)”

<sup>110</sup> Quoted by Kirchler from Fjeldstad and Semboja ( 2001 ) - study on tax behaviour in Tanzania.

<sup>111</sup> On tax morale in Switzerland by Torgler (2005).

<sup>112</sup> Quoting one last time from Kirchler (2007): “Based on the rather small effects of variables considered in the neoclassical economic approach (i.e., audit probability, fines, marginal tax rate and income), several studies conclude that it is important to consider also citizens’ acceptance of political and administrative actions and attitudinal, moral and justice issues as they are central to psychological and sociological approaches (Lind and Tyler, 1988 ; Pommerehne and Frey, 1992 ; Pommerehne and Weck-Hannemann, 1992 ; Tyler and Lind, 1992 ; Weck-Hannemann and Pommerehne, 1989 ).”

***b. Findings from research on citizens, the police and the courts – importance of “procedural justice”***

Several decades of research on criminal matters, and on interactions between citizens and authorities (police and courts in particular), paint a similar picture. Of course, deterrence does play a role in fostering compliance (i.e. deterring crime), but it tends to have an effect that is quite limited, except if considerable resources are expended so as to make the probability of detection really high. On the other hand, process-based factors appear to play a crucial role in determining sustained attitudes in respect with laws and regulations, and with public authorities.

One of the leading scholars on the issue of compliance, Tom Tyler, summarizes deterrence’s impact and limitations as follows (2003): “studies of deterrence (...) point to factors that limit the likely effectiveness of deterrence models. Perhaps the key factor limiting the value of deterrence strategies is the consistent finding that deterrence effects, when found, are small in magnitude. (...) A further possible limitation of deterrence strategies is that, while deterrence effects can potentially be influenced by estimates either of the certainty of punishment or its severity, studies suggest that both factors are not equally effective. Unfortunately from a policy perspective, certainty more strongly influences people's behavior than severity, and certainty is the more difficult to change. (...) To influence people's behavior, risk estimates need to be high enough to exceed some threshold of psychological meaningfulness.” This means that, in practice, deterrence is impossible to achieve in most cases: the resources required would be far too high (in a world of limited resources, society cannot commit enough resources to deterring violations in each and every regulatory field), and the intrusion on privacy and limitations of individual freedoms would be far too high. Tyler cites murder as a key example: on this topic, society has allocated enough resources that indeed there is a real deterrence effect – but achieving similar intensity of enforcement in all other fields is impossible. In addition, deterrence approaches “are not self-sustaining and require the maintenance of institutions and authorities that can keep the probability of detection for wrongdoing at a sufficiently high level to motivate the public.”

By contrast, process-based approaches aim at increasing the legitimacy of rules and authorities by improving the level of fairness as perceived by citizens. The focus is not primarily on “distributive justice” (i.e. having *outcomes* that are deemed fair) – although this also has been found to have a significant impact on compliance, it is significantly less strong than the process effect, and in addition it is in practice impossible to reach decisions that would satisfy everyone. Rather, the emphasis is on “procedural justice”. In the words of Tyler (2003), who has been one of the key proponents of this approach for several decades: “The procedural justice model involves two stages. [First,] public behavior is rooted in evaluations of the legitimacy of the police and courts. (...) In other words, people cooperate with the police and courts in their everyday life when they view those authorities as legitimate and entitled to be obeyed. [Second,] the antecedents of legitimacy. The procedural justice argument is that process-based assessments are the key antecedent of legitimacy (...). In this analysis, four indicators – summary judgments of procedural justice, inferences of motive-based trust, judgments about the fairness of decision making, and judgments about the fairness of interpersonal treatment—are treated as indices of an overall assessment of procedural justice in the exercise of authority.” Crucially, research has shown that the effect of procedural justice is *significantly stronger* than that of deterrence.

The procedural justice effects are found in many fields and settings (mediation decisions Lind et al. 1993, dismissal from employment Lind et al. 2000 etc.). What also matters is that procedural justice, and the legitimacy it fosters, are long-term drivers of compliance, and largely self-sustaining (at least they do not require an *increase* in resources – but a change in behaviours and

approaches). The changes involved in how authority is exercised are, however, significant compared to what is the practice in many cases. Quoting Tyler (2003) again, the key conditions needed to achieve a procedural justice effect are: “that decision making is viewed as being neutral, consistent, rule-based, and without bias; that people are treated with dignity and respect and their rights are acknowledged; and that they have an opportunity to participate in the situation by explaining their perspective and indicating their views about how problems should be resolved.”

## ii. Evidence of the lack of correlation between “more” and “better”

Inspecting more often is not just impossible in many cases without taking out resources from other fields, which may be more important; it is also no guarantee of better results. Studies on tax compliance, for instance, have found that excessive weight and intrusiveness of control could backfire and lead to increased resistance from taxpayers (Kirchler, Hoelzl 2006). Surveys conducted by the World Bank Group in a number of countries, and comparison in results in terms of regulatory outcomes (tax compliance, fire safety, epidemiological safety etc.) have further confirmed this point (IFC Ukraine 2007, IFC Kyrgyzstan 2010, IFC Mongolia 2010)<sup>113</sup>.

There are of course limits to the point until which it is possible to decrease supervision, inspections, and enforcement. Some kind of backup to the most essential regulations through active efforts to promote compliance appears essential – but it certainly should not mean only inspections, and also not “any kind” of inspection, to avoid adverse effects. Some research has indeed shown that below a certain point, the complete lack of deterrence resulting from too low inspection rates in some critical fields can lead to decreases in compliance (May, Winter 1999<sup>114</sup>). But this needs to be balanced against the possible excesses leading to no improvement (Blanc 2010), and in any case resource allocation needs to be strategic. There is much evidence suggesting that inspection and enforcement resources are already allocated in a way that is very much sub-optimal, i.e. not in proportion to risk, because this resource allocation is mostly path-dependent, i.e. coming from historical factors (Hood, Rothstein, Baldwin 2001 – Blanc 2012). Suddenly transferring resources to a certain field because of an incident is likely to worsen this, whereas careful analysis of incidents should of course happen and be used to update the strategic planning of inspecting agencies (Sparrow 2008).

## iii. Some practical illustrations of inspections problems linked to the RRR

The very existence of an agency designated with supervising a given field seems to automatically give rise to the expectation of perfect safety (or at least of enhanced safety). A small illustration of this can be found in the scandal that broke out in 2009 regarding a neurologist of the Medisch Spectrum Twente (Ernst Jansen Steur). After an initially brilliant career, it was found after investigations that he had had problems with substance abuse for years, and had been repeatedly

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<sup>113</sup> Though there is no easy publication summarizing it, there is also much evidence of this within the EU. Inspection surveys show very high rates of business inspections in Lithuania (at least before recent reforms), and relatively high rates in Italy, but safety indicators in these countries are not necessarily better, or sometimes worse, than in countries with less inspection visits. Of course, many factors play a role, but this should deter from simple equation of “more” with “better”.

<sup>114</sup> Also ample anecdotal evidence, such as industrial accidents in many parts of the United States (e.g. West, Texas disaster of 2013), in states where there was or is very limited regulatory supervision on many hazardous industries.

mishandling patients quite seriously (misdiagnoses, useless prescriptions and tests, and in one case unnecessary brain surgery). The case eventually went to trial, and two successive reports were commissioned on the case and the responsibility of the health care inspectorate (Inspectie voor de Gezondheidszorg, IGZ) in not reacting to reports of potential problems, complaints etc. (Lemstra 2009, Hoekstra 2010).

While the case was serious, and showed significant problems in the internal processes of the IGZ (and of course in the medical centre's management), it does not raise to the level of many medical scandals in neighbouring EU countries in recent years (in France, in the past years, several scandals have involved deaths in public hospitals (most notorious may be the cases of over-irradiation in Epinal Hospital) – the Twente incident did not involve any death, for comparison). The fact that the case led to a high level national report, and was seen as seriously putting in question the IGZ's effectiveness, indicates that there are automatically heightened expectations as soon as an agency is officially tasked with “inspecting”. We do not mean here that the IGZ operation was perfect, nor that the scandal was not serious. Simply that it got a far higher resonance because of the powers the IGZ is vested with, and which are quite unusual in Western Europe (where doctors are mostly self-regulated, and agencies in charge of hospital supervision are mostly lower profile than the IGZ). A dispassionate analysis would maybe have found that, in fact, the IGZ outperformed regulatory systems in France or Germany (such a study has not been done, but there is at least anecdotal evidence that this may be the case) – but its high visibility and the high expectations vested into it meant that the problem was immediately seen as deserving a full inquiry and a set of changes (again, many of which may have been warranted – we only comment here on the difference of treatment).

A second point is that when an incident happens that appears linked to a lack of supervision or a problem in the inspection and surveillance system, there is a risk that rushed decisions are made to change it, without a proper understanding of how this system actually works, what may be the real causes of the problem, and what the changes will bring. In France, a series of scandals (most strongly the *Mediator* scandal, which is estimated to have caused hundreds or even a couple thousand deaths over a few decades) led to the replacement of the Agency for Sanitary Safety of Health-Care Products (*Agence française de sécurité sanitaire des produits de santé*, AFSSAPS) with the Agency for Drugs and Health-Care Products Safety (*Agence nationale de sécurité du médicament et des produits de santé*, ANSM) in 2012. Changes in scientific governance were made to try and ensure that conflicts of interest did not again lead to major hazards in drugs being purposefully ignored upon approval and periodic review of drugs licenses. There was also, however, a considerable “inspections” side to this decision to transform the agency. Supervision was in particular held to have been too lax and too slow in the PIP Breast Implants scandal, which broke out in 2010 and affected several thousand women (possibly up to 20,000). The new ANSM has now considerably tightened its requirements and inspections protocols. Any change in the production process of medical devices, regardless how small, has to be notified to the conformity assessment provider, and the ANSM has indicated to class III medical devices producers (highest risk category) that it essentially would not allow them to change conformity assessment providers (even though legally they are entitled to do so). This means that the main conformity assessment provider for French companies (LME/G-MED, the only French notified body in this field<sup>115</sup>) is

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<sup>115</sup> Manufacturers may use notified bodies from other EU member states but the ANSM discourages switching, as indicated, and the vast majority have contracts with LME/G-MED.

overwhelmed with notifications of changes, and does not respond. As a result, manufacturers are simply unable to proceed legally to any improvements in their manufacturing processes. Inspections by ANSM inspectors, who are pharmacists and not engineers or technologists, are also widely (but informally) reported to be very strict, but completely unhelpful in terms of actually finding solutions to improve safety<sup>116</sup>.

Without entering into more details, what is typical of inspections-linked RRR is that the problems were widely misunderstood, and thus the “remedies” end up worsening the situation. PIP was essentially what one could call a criminal operator – it went far beyond cutting corners, and was actively dissimulating. The conformity assessment provider did not see the problems because it did not suspect that there may be dissimulation. If it had suspected something, its auditors would have needed real investigative skills to find out. This all points out to issues in overall surveillance and early warning from surgeons, in the auditing process (possibly), and maybe in the development of a proper risk-based system for inspections. However, the response has been mostly to have very strict, systematic inspections, by inspectors with limited qualification in this specific field, and with a level of rigidity that is leading manufacturers to stop improvements, and to consider relocating in other countries. A “remedy” that has little connection to the problems, designed in response to an exceptional case (a real criminal, who would not, in any case, have been deterred), resulting in problems that are heaviest for the most law-abiding manufacturers.

#### iv. Having the wrong targets leads to wrong results

Performance management is a crucial area for regulation in general, and inspections specifically, as selecting the right indicators and measuring them appropriately will help support the right type of approaches, and wrong indicators and flawed measurement will, conversely, lead to failure.

Though this may sound obvious for each inspectorate to clearly know what it stands for, experience shows that in many countries, defining their goals in terms of risk mitigation or public welfare tends to be quite a difficult task for many of them. The reason for this is that most regulatory and inspecting agencies were set up in order to enforce specific legislation – not to reach a specific goal. The goals of the said legislation may or may not have originally been clear, but in most cases, after a period of time, some institutions are bound to have a less and less clear purpose – while some others may have on the contrary a very clear goal.

The particular difficulty in terms of defining and setting goals (and measuring success in reaching them) lies herein that inspectorates and regulators only have (at most) an indirect effect on their area of competence. A food safety agency, for instance, does not itself produce or process food, and only food business operators (FBOs) can directly ensure safe provision of food. Regulators and inspectors can only create incentives for FBOs to improve their practices, and/or discourage bad practices. Furthermore, safety (e.g. food safety) or other goals (e.g. government revenue) may be impacted by many external events (epidemics, consumer habits and behaviours, economic cycles etc.), on which inspectorates have little or no influence.

This means that it is very difficult to attribute specific results in terms of safety (or other public goods) to the action of one or several regulators or inspectorates. At most, some indirect determination can be made by tracking changes over time, comparing levels with countries having

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<sup>116</sup> Summary resulting from direct interviews by the authors.

sufficiently similar conditions, etc. It also means that changes in the effectiveness of inspectorates' actions can only be tracked (if at all) on a relatively long timeframe. Such indirect action as they have cannot, indeed, be expected to have an impact in the very short run. This is very important from an RRR perspective, as many inspections-focused RRR decisions precisely stem from wholly unrealistic expectations (among both policymakers, experts, media and the public) regarding what inspectorates can really achieve.

Any attribution of a sudden change in levels of the indicators being tracked for "effectiveness" should be regarded with caution and further investigated for (i) potential problems in measurement and/or (ii) external factors. In general, positive changes as a result of inspectorates' actions (or, though they are not wished for, negative changes as a result of poor inspectorate practices) can only be seen over at least a few years. Sudden changes in indicators due to a major incident should be looked at carefully to understand whether it really stems from a systemic failure or a "black swan" event (low probability, high impact).

There are a couple additional considerations to bear in mind regarding measurement of inspection indicators relating to effectiveness:

- Compliance should not by itself be taken as indicator – first, because it assumes that complying with legislation would be equivalent to a higher level of public good and/or safety, whereas, if legislation has in fact been poorly designed, this may not be the case. Second, because compliance is by definition measured by inspectorates themselves, and thus they would have too much discretion to alter the data in order to show a higher performance level (N.B. this problem is well known with crime statistics and police effectiveness).
- More generally, data should in every possible case be gathered either by other agencies/structures (e.g. health care system for food safety), and/or collected through procedures or instruments that leave as little room as possible for individual discretion and potential manipulation (e.g. epizootic monitoring per EU guidelines, or pollution monitoring through automated measurement stations etc.).
- Quality of data may be problematic in any case for a number of indicators, because measurement relies on detection/reporting, which may not occur in a sufficiently systematic way. This can be the case for instance with a number of food-borne diseases (require patients to report to their doctor/hospital, and the latter to conduct testing in every case), occupational accidents (some may end up hidden with "unofficial" settlements between employers and employees), etc.

For all these reasons, while it is extremely important for inspectorates to clearly articulate their goals and objectives, and define and track indicators to measure their performance in this regard, it is just as needed to (i) have clear guidelines on how the data should be collected and (ii) treat the data and its evolution with caution and not put excessive emphasis or importance on them. Short-term variations, in particular, are at least as likely to be due to external factors, "black swans" or "statistical noise" as to changes or structural failures in how inspectorates work.

Another, important risk, is that inspectorates (or other legal enforcement agencies, e.g. the police, as these findings apply equally to them) "hand pick" objectives that are of limited relevance for the welfare of the society, but are easy to improve, and can allow them to show "success" easily. It is important to review indicators of law enforcement and regulatory enforcement structures to ensure indicators and targets are meaningful. As Buruma (2004) puts it (writing about the police, but the findings can be applied to other fields), there can be a tendency "to focus on marginal offenders – because these cases enhance output statistics of bureaucratic entities without costing

too much trouble”<sup>117</sup>. This all goes to show the importance of not only defining adequately what is being measured, and how, but of being mindful of how to interpret data and changes in results. Managing expectations, once again, is key.

#### v. “Responsive Enforcement” as the right approach

In conclusion, the inspection system must be seen in an adequate perspective: an important element to contribute to safety and other desired social outcomes, but one that has its limitations both in scope and impact. It is essential to define clearly and appropriately the objectives of inspections, measure them regularly to evaluate performance compared to the goals, and be fully transparent on all these points so as to foster realistic expectations in the public. In terms of approaches, deterrence, while being an important part of the regulatory system, can at most be one of its pillars, certainly not the only one, and maybe not the most important one. It must serve as a backstop to voluntary compliance – an indispensable one, and one that has to be wielded strategically given limited resources (Tyler 2003). This has been clear for a long time, and the combination of deterrence, persuasion and education (Scholz 1994) – integrated in a system of “responsive regulation” (Ayres, Braithwaite 1992) – has been shown to be the most effective approach to regulatory delivery. From this perspective, a few things can readily be said about inspections and enforcement:

- They cannot alone achieve improvements in safety – they can even, if done in the wrong way, backfire
- Resources are limited and need to be used strategically – allocating more resources to a given field based on an RRR reaction is very likely to end up decreasing resources in another area that is, in fact, more important
- *How* inspections are conducted is crucial – if they are done in a way that fosters legitimacy of authorities, and conveys useful information, they will contribute to a self-sustaining procedural justice effect, that will secure long-term compliance among the majority
- Regulatory strategies should first be suitable for the majority – those who voluntarily comply with the laws, have internalised the obligation. Procedural justice, on the contrary, can help grow the ranks of this category. Fear of sanctions is useful for those who comply only because of rational calculations – but these are in the minority, so it is essential that inspections and enforcement do not become so heavy that voluntary compliant citizens or businesses shift away from compliance because of what they feel as excessive authority, i.e. because of a decrease in procedural justice (see Voermans 2014, Elffers 1997).

In other words, not everything in the world is a nail. If you only have a hammer, and use it all the time, you may end up fastening a few nails – but also breaking quite a lot of valuable stuff in the process. The same goes with indiscriminate use of “tough enforcement”. This goes not only for the indiscriminate use of inspections as an “all purpose” tool (“we have a risk, let’s inspect everyone”) – but also for the idea that “tough sanctions” are an easy response (again, one that can be observed both on the left and right sides of the political spectrum, although in response to different threats

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<sup>117</sup> Conversely, “clearance rates” for opened police cases can be of little value, because it has been observed that if the police will be measured strictly based on clearance rates, it will do everything possible to discourage people from filing complaints in fields where it knows elucidation of the crime will be very difficult (and/or securing convictions is highly unlikely). This can in principle be alleviated by using representative surveys on crime rather than police statistics, but in practice this is rarely done.

and categories of offenders). Mandatory sentencing guidelines have proven their inadequacy, and appropriate judicial decisions (and follow up implementation decisions) should be taken based on a combination of risk-assessment and consideration of guilt, intent, effects, and context (Buruma 2004). This is true both in criminal justice, and in regulatory issues (Ayres, Braithwaite 1992).

## B. Best practice and principles

Over the past 15 years, increasing attention has been paid by governments around the world, and by international organizations, to the improvement of inspection and enforcement practices. Among the most notable steps are United Kingdom's 2005 *Hampton Review* and subsequent reforms, the Netherlands' programme *Vernieuwing Toezicht* since 2006, the publication of successive toolkits on inspections reform by the World Bank Group (WBG 2006 and 2011), and the publication of OECD's "Best Practice Principles" on inspections and enforcement (OECD 2014). A remarkable level of consensus can be found throughout these various publications and initiatives<sup>118</sup>. It is worth summarizing here the most relevant principles in terms of the RRR<sup>119</sup>, as well as present a few of the best examples that can serve as further inspiration.

### i. OECD principles

The 2014 OECD principles are 11 in total (Evidence based enforcement, Selectivity, Risk focus and proportionality, Responsive regulation, Long term vision, Coordination and consolidation, Transparent governance, Information integration, Clear and fair process, Compliance promotion, Professionalism). Out of this list, the following are particularly relevant to the RRR (keeping the numbering from the OECD report):

1. *Evidence based enforcement.* Regulatory enforcement and inspections should be evidence-based and measurement-based: deciding what to inspect and how should be grounded on data and evidence, and results should be evaluated regularly.
2. *Selectivity.* Promoting compliance and enforcing rules should be left to market forces, private sector and civil society actions wherever possible: inspections and enforcement cannot be everywhere and address everything, and there are many other ways to achieve regulations' objectives.
3. *Risk focus and proportionality.* Enforcement needs to be risk-based and proportionate: the frequency of inspections and the resources employed should be proportional to the level of risk and enforcement actions should be aiming at reducing the actual risk posed by infractions.
4. *Responsive regulation.* Enforcement should be based on "responsive regulation" principles: inspection enforcement actions should be modulated depending on the profile and behaviour of specific businesses.

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<sup>118</sup> And indeed new initiatives get inspiration from more established ones: the Lithuanian inspection reform programme, started in 2010, was based on the *Hampton* principles and further got input from the World Bank Group and OECD. The Italian inspection reform, started in 2012, has again drawn a lot on the UK experience, World Bank Group advice and OECD guidance.

<sup>119</sup> For this purpose, we will use the OECD principles, which are the most recent publication, and draw upon all previous ones.

5. *Long term vision.* Governments should adopt policies on regulatory enforcement and inspections: clear objectives should be set and institutional mechanisms set up with clear objectives and a long-term road-map.

7. *Transparent governance.* Governance structures and human resources policies for regulatory enforcement should support transparency, professionalism, and results-oriented management. Execution of regulatory enforcement should be independent from political influence, and compliance promotion efforts should be rewarded.

10. *Compliance promotion.* Transparency and compliance should be promoted through the use of appropriate instruments such as guidance, toolkits and check-lists.

These principles all share a common foundation: selectivity. Inspections are not a “one size fits all” solution, not a “silver bullet” nor “cure to all ills” – they should be used when they are useful only, and preferably when they are the *most* useful and effective tools, not indiscriminately. Not every risk deserves specific government resources to be expended to control compliance with safety measures. Not every premise, operator, citizen presents the same risk level in a given field. The same approach to enforcement will not be appropriate in every case. Effective and efficient inspections, supervision, enforcement require to *embrace* selectivity. This is sometimes seen as a breach of equality, in our view mistakenly. In a world of finite resources, making choices is not an option, but a given – these choices can either be conscious and based on clear and rational criteria, or made by default<sup>120</sup>. We submit that the first approach is considerably better. Furthermore, as we have seen above, transparent criteria and proportionality of response will contribute greatly to increasing procedural justice, which means that citizens will experience the system as in fact *more fair* than a system of “blanket inspections” and “zero tolerance”, which pays no attention to context.

Good practice principles for inspections and enforcement also go further in advocating changes in the relationships between authorities and businesses or citizens – they strongly put the onus on authorities to effectively convey the meaning of their regulations, and to guide regulatees on how to achieve compliance. This has been consistently found to be more useful, in the majority of cases, than checking, finding problems and issuing sanctions. Not only does it foster legitimacy of authorities through procedural justice, and thus doubly increases compliance, but many cases of non-compliance are simply due to ignorance and misunderstanding. Checks without support will be of no help – compliance assistance will be effective, with or without checks.

Finally, a crucial recommendation is to put inspections and enforcement “at arm’s length” from political interference. Political decisions should intervene for long-term planning and strategy, setting principles, goals, and objectives – not for operational planning decisions. This would mean as much as possible, through a variety of institutional mechanisms (e.g. having inspectorates report to management boards rather than directly to ministers, etc.) and practices, ensuring that political office holders do not give direct instructions on what to inspect, or how.

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<sup>120</sup> See also Buruma (2004) in the context of law enforcement: “using the expediency principle – that is deciding not to prosecute someone – might be a wise decision if it is based on actuarial justice; it is mere ineffectiveness if it is an indiscriminate reaction to the impotence of the judicial system”. See also the presentations made at the International Seminar on Regulatory Discretion in The Hague, December 2013: <http://www.ial-online.org/2014/01/international-seminar-on-regulatory-discretion-summary-of-findings-and-presentations/>.

In summary, best practice principles for inspections and enforcement can help fight the RRR in three ways: by emphasizing selectivity rather than indiscriminate use of inspections, by putting compliance support first, and by advocating for strong mechanisms to shield inspectorates' (and law enforcement) day-to-day operations from political interference.

## ii. Guidance, prevention, procedural justice – practical examples

A wealth of reports, presentations etc. exist presenting good practices in inspections and enforcement, and more broadly in what is called in the United Kingdom “regulatory delivery” (i.e. all actions, institutions, tools that are used to “make regulations happen”)<sup>121</sup>. We will not attempt to summarize them here, but only refer to a couple of examples that are particularly relevant to the RRR angle.

### a. Tax compliance education in Sweden

One of the largest scale experiments showing the effectiveness of educational interventions and of targeting *values* and *legitimacy* to improve compliance was conducted in Sweden in 2002-2005. The whole campaign and its impact have been described in details (Wittberg 2006), and vindicate strongly the principles exposed above. In summary, the reason for the programme was that the Swedish Tax Agency noticed through surveys and other sources the start of a change in taxpayers' morale, with younger generations apparently less convinced of the legitimacy and need of taxes, and overall less inclined to voluntary compliance<sup>122</sup>.

As Wittberg presents it, the campaign that started in 2002 did not aim to “spread moral propaganda” but rather “to encourage young people to talk and think about taxes so that they could make their own decisions about what was morally right or wrong”. Thus, it can be said that the campaign drew more on procedural justice effects and on giving young citizens a sense of empowerment, rather than on a top-down, “moralistic” approach. A number of communication activities were combined, including different films, information materials in schools, a website etc. A key component of these was simply showing what taxes were spent on, a point on which there are frequently major misconceptions.

The campaign was a success – the indicators predicting voluntary tax compliance in regular surveys again went up, not only in the target age group (18-24) but in the population at large.

### b. The Netherlands' “Prettig Contact met de Overheid” project

Since 2008, in response to the third assessment of the General Administrative Procedure Act implementation, the Netherlands' Government launched a project (which has now gone through several phases<sup>123</sup>) exploring novel types of relations between the administration and the public.

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<sup>121</sup> See e.g. Blanc 2012, available online at: <http://www.oecd.org/gov/regulatory-policy/Inspection%20reforms%20-%20web%20-F.%20Blanc.pdf>

<sup>122</sup> Specifically, from 1998 to 2001, surveys showed the percentage of respondents aged 18-24 answering “yes” to the question “I personally think it's okay for people to cheat on their taxes if they get the chance” went up from 7% to 12%. Other indicators showed a likewise worrying trend for tax compliance.

<sup>123</sup> The programme has published a number of reports – see e.g. Marseille, Tolsma, de Graaf 2013 available online along with other reports at: <http://prettigcontactmetdeoverheid.nl/bibliotheek/documenten/besluitvorming-bezwaarprocedures>

This project has been attempting to develop more “informal relations” and foster more effective public administration, and higher public satisfaction, by using procedural justice mechanisms.

One of the key findings from the administrative procedure assessment that gave rise to the project was that “people in general prefer informal procedures with more opportunities for direct interpersonal contact compared to the customary procedures which tend to be more formal and involve primarily written communication” (van den Bos, van den Velden, Lind 2014). The project is called *Prettig Contact met de Overheid* (“nice contact with authorities” – called in English “Fair Tracks”), a name that clearly sets forth its aims. It covers “22 pilot projects and 21 government agencies and concerning 16 different administrative domains” (*ibid.*). An interim evaluation study shows that “the citizens experienced a high degree of procedural justice, yielding an average score of 4.39 on the 5-point scale with a relatively small standard deviation. Notably, 91.8% of the citizens experienced the interaction with the public official as fair and honest (indicated by an average score of 4 or higher). In other words, the vast majority of the citizens experienced a high level of procedural justice” (*ibid.*).

Not only did the respondents reporting a higher level of procedural justice express more satisfaction with the process, and higher trust in public authorities – this also translated into objective outcomes, in particular a faster resolution of the cases: “these findings suggest that careful attention to procedural justice in interactions with citizens can lead to satisfactory resolutions for all parties at an early stage” (*ibid.*). The survey also confirmed that, as long as procedural justice was perceived as high, the overall level of satisfaction of respondents remained high, even when the case was not resolved or the outcome was not satisfactory for them.

Quoting from the same study, we can summarize the most important conclusions as follows: “the experience of procedural justice was positively associated with enhanced citizen satisfaction with the outcomes obtained from the informal interaction with public officials. The results also show that citizens award higher scores for interaction with the government when they feel they have been treated in a very good manner. And when perceptions of procedural justice citizens were higher they also had more confidence that the government agency would stand by the agreement and they trusted the government more. (...) fair and respectful treatment or experienced procedural justice was more important than outcome considerations. Perceived procedural justice was important to citizens when the outcomes of cases were favourable to them, and the experience of procedural justice was even more important when citizens viewed outcomes as unfavourable. (...) There was also some evidence that the strong effects of the experience of procedural justice that were found in the informal setting of the Fair Tracks programme are even stronger for more official or formal settings, (...) when things get “tough.” (...) we think it would be wise to review the current training programmes for public officials in order to verify whether these trainings pay enough attention to bringing about interactions with citizens that focus on fair, just, and respectful treatment”.

It would be very important and beneficial to ensure that the findings from this project are fully taken into account and used in all areas of government. Indeed, precisely in order to address risk effectively, what matters is not primarily to be “tough” but to have the adhesion of the public. This can only be ensured effectively if procedural justice is high. What is needed is to have inspections, policing and enforcement that effectively foster compliance through legitimacy, and procedural justice is one of the key elements for this.

### *c. The United Kingdom's experience in "Better Regulatory Delivery"*

The aforementioned 2005 *Hampton Review* was followed by a number of measures and initiatives to try and improve the way inspections and enforcement were implemented – which evolved into a broader, new conception of the way “frontline regulation” happens, called “better regulatory delivery”. Some of the key milestones were the adoption of the statutory Regulators’ Compliance Code by Parliament in 2008 and the creation of the Local Better Regulation Office (LBRO) which became in 2012 the Better Regulatory Delivery Office (BRDO), with a mandate now covering national as well as local regulators. In 2014, the new Regulators’ Code was adopted, now including a “growth duty”, i.e. the obligation for all regulators to consider not only their own primary mandate (e.g. ensuring food safety, environmental protection etc.) but also the effect on economic growth and jobs, when taking a decision.

LBRO first, and even more BRDO, have been supporting the move towards more risk-based and risk-proportionate use of regulatory instruments such as licenses, permits, inspections etc. They have also been pushing for more “responsiveness” in the way regulatory officers work (differentiating between operators based on compliance history, behaviour etc.), all of which drew on many experiences and examples within the UK dating back already a couple of decades. They have also been promoting an approach to inspecting and interacting with the public that promotes more respect and attention – thus leading to higher procedural justice – but also pointing out the need to strengthen inspectors’ investigative skills to be able to identify problems where they are really serious, and potentially hidden. This has found its best expression in the “competency framework” for regulators<sup>124</sup>, which translates itself both in an assessment tools<sup>125</sup> and a set of training modules<sup>126</sup>.

Another outstanding example of a “better regulatory delivery” approach is the development and roll out of the “Safer Food, Better Business” (SFBB) toolkit<sup>127</sup>. This stems from the finding that many catering businesses had fundamental problems with compliance because of ignorance or misunderstanding of safety requirements, and that this required an approach based on guidance and compliance promotion, including outreach to the many professionals working in the UK but speaking a foreign language. One of the experiments leading to the development of SFBB was made in Chinatown by the Westminster City authorities<sup>128</sup>. After finding that non-compliances in restaurants were not only frequent, but not improving after repeated inspections, the Westminster regulatory team attempted to understand why. They found out that chefs mostly did not really understand English well, were not aware of local safety regulations, changed repeatedly, and that an inspection with negative findings resulted in a loss of face that made compliance, if anything, even less likely. The response was to emphasize prior training, and to use the chefs’ language as much as possible. Along these lines, the SFBB toolkit exists in 16 languages, those most widespread among chefs working in the UK.

Another good example of dealing with risk in a proportionate and rational manner comes from the Health and Safety Executive’s enforcement policy in respect to iron gas mains. The context of the

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<sup>124</sup> See the summary page here: <https://www.gov.uk/government/collections/brdo-professional-development-and-culture-change-resources>

<sup>125</sup> See the Regulators Development Needs Assessment tool here: <http://rdna-tool.bis.gov.uk/>

<sup>126</sup> See the Guidance for Regulators – Information Point here: <http://www.regulatorsdevelopment.info/grip/>

<sup>127</sup> See the portal: <http://www.food.gov.uk/business-industry/caterers/sfbb>

<sup>128</sup> Short case study: [http://www.cieh.org/library/Knowledge/Food\\_safety\\_and\\_hygiene/Case\\_studies/Westminster%20CHIP.pdf](http://www.cieh.org/library/Knowledge/Food_safety_and_hygiene/Case_studies/Westminster%20CHIP.pdf)

adoption of this enforcement policy was a typical RRR one: “In September 2001 HSE published its enforcement policy for the replacement of iron gas mains for the period 2002 - 2007. This followed a high level of societal concern about the potential consequences of gas mains failure. At that time records showed there were about 91 000 km of iron mains within 30m of property ('at risk') which may be a risk to people. (...) Given the uncertainty about this issue, HSE undertook to review the policy before the end of the first five years so that an agreed programme could be confirmed for the following period. HSE published its report 'Review of the Health and Safety Executive's enforcement policy for the replacement of iron gas mains' in September 2005<sup>129</sup>”. The HSE's conclusion was that it was unrealistic to replace all iron gas mains in a short timeframe, but that at the same time “there is currently no feasible alternative to maintaining the network other than to decommission it and replace it with a more suitable material, usually polyethylene. This is the basis of HSE's enforcement policy, which requires iron gas mains within 30m of property to be decommissioned and replaced at the latest by March 2032<sup>130</sup>”. Basically, the enforcement policy offers gas network operators the option of developing a replacement programme and, if HSE approves it (for which it must be ambitious enough), they will have serious benefits in terms of enforcement: “if pipeline operators have an approved programme, they have a defence from prosecution if they are complying with it and a failure occurred on a pipe which was not yet due for replacement under the programme. However, the defence would not apply if the operator had knowledge which would indicate that the particular pipe was likely to fail”. This is a very valuable example as it took an issue where the risk was real, but the costs also considerable, and there was a need to address public concerns, work seriously on resolving the issue on the longer term, and avoid excessive economic costs. The solution adopted does not remove the legal obligation to overall replace all these pipes, but accepts that there must be a timeframe to do so, and offers defence from prosecution to firms that work in good faith on addressing the issue.

In summary, these examples from the UK show the importance and value of having regulators consider not only their narrow goals but the broader public interest (including economic and social), of engaging with regulatees and insisting on procedural justice, of developing real tools to promote compliance. The stability and shield from political interference offered by the governance model of the HSE is also an important element of success, as is the existence of a strong and adequately resourced “reform team” that is the Better Regulatory Delivery Office.

### C. Conclusion and recommendations

In summary, an adequate inspection and enforcement policy (including as much as possible not only “traditional” economic regulation domains, but also law and order more broadly) can play a major role in avoiding RRR situations and misguided policies. It can be an important element of a proper engagement and discussion regarding public risks – provided that there is real dialogue and transparency (including about uncertainty, and about limitations of regulations and enforcement), and that there is trust in the institutions<sup>131</sup>. In fact, “good” inspections and

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<sup>129</sup> See HSE's website page on this issue: <http://www.hse.gov.uk/gas/supply/mainsreplacement/irongasmains.htm>

<sup>130</sup> See iron gas mains FAQ page on HSE site: <http://www.hse.gov.uk/pipelines/faqs.htm>

<sup>131</sup> On the importance of these different aspects, see UWE Bristol/EC 2014, available at: [http://ec.europa.eu/environment/integration/research/newsalert/pdf/public\\_risk\\_perception\\_environmental\\_policy\\_FB8\\_en.pdf](http://ec.europa.eu/environment/integration/research/newsalert/pdf/public_risk_perception_environmental_policy_FB8_en.pdf)

enforcement can reinforce this trust, and “bad” ones squander it – but “good” and “bad” here do not just mean “effective in the end”, but adequate in terms of procedural justice, and honest and transparent on their objectives, indicators, results and limitations.

Some of the most important elements of such “good” inspections and enforcement policies include:

- Shielding, through adequate governance mechanisms and structures, inspection and enforcement structures from day-to-day political interference – and reserving political decisions for really strategic decisions
- Ensuring that inspection and enforcement officials work in a way that is respectful and corresponds to high standards of procedural justice, as this forms the basis for long-term legitimacy
- Manage expectations of the public and policymakers by a sound performance management approach: meaningful and realistic objectives and targets, trusted performance measurement data
- Do not use inspections and enforcement as a universal tool but rather as one among many instruments that can be used to foster higher compliance and increased safety – along with information and guidance, in particular.

## 9. Conclusion and summary of recommendations

The different cases presented above allow us now to come back to the ideas set forth in the introduction, and at the same time validate them and see what recommendations can be formulated in order to avoid the “wrong kind” of RRR, and ensure that accidents and crises are addressed adequately, but do not result in responses that create more harm than benefits.

The goal of the research was to have an overview of international practice and experience relating to the Risk Regulation Reflex, in order to show to which extent (a) the issue is relevant to other countries in the OECD and EU and (b) what is being done in (some of) these countries to address it – and to develop a set of recommendations on this basis so as to mitigate the negative impacts of the Risk Regulation Reflex.

### A. Reacting to risk – from good to bad regulation

Our first conclusion has to be that the RRR is indeed a natural political reaction to tragic events that call for a response from government and, as such, can be found in many different countries. Using regulation as a response is a common reaction and the heightened public concern puts pressure on politicians and policy-makers to cut corners and propose poor quality regulation. We also acknowledge that a tragic event may also be a trigger for good quality regulatory regimes and the history of regulatory regimes over the last few hundred years owes something to the political pressure for change that can come from a shocked public. But the heavy lifting of designing regulatory regimes for safety has largely been completed in most developed countries, leaving room only for relatively incremental or marginal improvements.

Some of the dangers of the RRR come from the limited scope that now exists to make a significant difference through new regulatory regimes (higher marginal cost of improvements), and from the damage that poorly planned regulation can do to the systemic integrity of pre-existing regulatory regimes. The other strongly negative effects of the RRR stem from the imbalance of (small, if any) positive impacts, and the considerable costs that poorly designed regulations impose. The economic or social harm caused thus often vastly outweighs the benefits, and may even result in a net negative impact on safety (as income level is one of the highest contributors to overall safety). Finally, excessive regulation and limitation of individual initiative and freedoms, when it is clearly perceived to be without proportion to the benefits expected or achieved, substantially harms the legitimacy of rules and authorities – which, again, can lead to a net decrease in safety as compliance decreases because of lower legitimacy, even on more critical regulations.

Such negative effects of the RRR have been found throughout countries, regardless of their level of development, legal and economic structures, etc. – from former Communist countries to the UK, from the USA to France, from Spain to the Netherlands.

### B. Practices, processes and institutions to handle better the “risk conversation”

Our second conclusion is that trying to change the positions and interests of politicians, interested stakeholders (“experts”, “safety equipment providers”, NGOs etc.), the media and a concerned public overnight is unrealistic. There is a way forward, however, in crafting practices and institutional solutions that (a) ensure the necessary public trust is built and maintained and (b) create time for reflection, (c) allow better quality policy-making to provide a solution or (c)

provide a gate-keeping function that prevents poor regulation to be proposed or adopted. We have reviewed how different countries have tackled these challenges and found both good and mixed practice.

### i. Trust as a foundation

Trust is often the most problematic element. The public is quick to mistrust the motives of various actors – with whom one mistrusts more often influenced by ideological views, but also by previous experience. Thus, mistrust in the motives of private businesses often drives the RRR, even though RRR-driven policies may end up benefiting strongly some private actors (which may, quietly, have been pushing for them). Most centrally, distrust in policymakers, senior civil servants and official scientific institutions is often strong, and fueled by prior inaction or assurances of innocuity in front of situations which have been later revealed to be either somewhat risky, or downright disastrous<sup>132</sup>. Transparency is still too often an area where governments and public administrations are found wanting, and there is the risk that pushing for scientific advisory bodies to be too much on the side of “reassuring the public” ends up undermining whatever trust may exist in their statements.

Trust can only be built by transparency and honesty on what is known and what is not, on what are the potential upsides and downsides of different policy choices. Trying to lull the public in “trusting” the authorities based on false assurances of certainty is sure to backfire and has been found to be the root for much subsequent RRR situations. Trust is long to be regained, but it can be<sup>133</sup>. Engaging with the public, rather than trying to “communicate” (or “spin”), is the first step. An essential part of this engagement is making clear what the trade-offs are, as much of the RRR decisions stem from a refusal to squarely accept the need to choose between conflicting priorities (wanting more safety, lower prices, more choice etc. all at the same time)<sup>134</sup>. Only if trust is established will there be acceptance from the public for a “fact finding, analysis and reflection” stage after an incident. The institutional forms for this can differ (sector-specific institutions, scientific councils, *ad hoc* commissions) but trust is needed for their success, and transparency the condition for this.

### ii. Time for reflection

Creating time for reflection is something that can be provided by institutional or process requirements. This also fits well with mainstream Better Regulation principles and those countries that have been in the forefront of such reforms (UK, US and Australia, amongst others) already have restrictions on how quickly regulations can be produced. However, many regulatory areas (or levels in federal or decentralized polities) are excluded, and these restrictions and process rules are also largely subject to political override in an emergency. But it is such political

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<sup>132</sup> This is clearly an increasingly acute problem in much of the EU, in France for instance, in the wake of successive scandals relating to drugs, medical devices etc. This makes it very difficult to get the public to trust official recommendations on other issues.

<sup>133</sup> As evidenced by the gradual, but ultimately successful, rebuilding of trust in official scientific recommendations in the UK, after the “Mad Cow” scandal.

<sup>134</sup> A way forward on this is in linking more closely scientific advice and evidence with a RIA-type process where potential costs and benefits are weighed against each other. See point iv. below.

emergencies that often exemplify the RRR at its worst and it is also frequent in topics such as anti-terrorism that bypass the regulatory process controls. Only the UK appears to have come close to mastering a political lock-down on political override, and done so across a truly wide spectrum of regulatory instruments. Although its Regulatory Policy Committee provides the necessary review mechanism, it is the hard political decisions taken by Ministers in the Reducing Regulation Committee that provide the level of enforcement needed to make the rest of the system work. Ultimately, only politicians can control the RRR.

### iii. The just role of science

Even if there is time to apply better quality policy-making, the skills, mind-set and processes also have to be present in the policy community to be able to take advantage of it. An emphasis on science is seen as a counter-balance to populist pressures for simplistic solutions. However, science cannot make value-based decisions and so cannot replace political decision-making<sup>135</sup>. What is more important is an emphasis on evidence, since that should ground decisions more in reality. The importance we see in “science” is embedding the importance of finding as much evidence as can be gathered in the time available – including in an open and transparent way what are the uncertainties, and the known and potential trade-offs.

We have reviewed how different countries, and also the EU, have tried to build science and evidence into the policy community and again the UK’s approach of a network of scientific advisers sitting alongside the more traditional policy professionals appears to provide greater traction than separating “science” into a separate regime, since that separation can politicise its role, as seen with the EU’s Chief Scientific Adviser.

### iv. Regulatory Impact Assessment, better regulation, expert advice – the letter, and the spirit

We also assumed that the role of RIA ought to be part of the answer to the RRR, since it is a central tool in the Better Regulation approach to rule-making and should prevent poorly thought-out proposals being approved. However, what we found in both the extensive literature and practice is a combination of RIA as a discipline and RIA as a process. Ideally, good RIA practice should be internalised by policy-makers as a normal discipline but in most cases it appears to need institutional processes to enforce its application. This also sets up a tension between what is done for its own sake and what is mandated. In some jurisdictions, otherwise good quality RIA practice simply does not apply to the stage or to the subject-matter that is most vulnerable to the RRR, such as primary legislation in the US or criminal / justice policies in Australia<sup>136</sup>.

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<sup>135</sup> As evidenced by many policy debates in Europe, the USA and elsewhere – e.g. on very fundamental issues like the end of life, abortion, but also on environmental questions, where the questions are not only about uncertainty, probabilities, risks, but about which values are more important.

<sup>136</sup> There are also many examples of the way political priorities, election pledges etc. can lead to “overrides” of the RIA process, e.g. in Australia where the RIA system is otherwise well established. On the other hand, there is clear evidence that countries that have a strong RIA system (or regulatory areas that are covered by the RIA system, in countries where its reach is incomplete) are less prone to RRR-driven decisions, or at least more likely to have the RRR-driven proposals slowed down, discussed, mitigated through the RIA process. This can be seen e.g. by contrasting federal executive regulations in the USA with other regulations in the same country, or “strong-RIA” countries (UK, Australia) with countries that have informal or incomplete RIA (France, Netherlands etc.).

The UK's success in not only establishing "One In, One Out" but escalating it to "One In, Two Out" could be an interesting example for a process-based application of the "spirit of RIA", especially given the very comprehensive range of regulatory instruments caught in its remit. A critical aspect of successful application of RIA certainly is to ensure that it is understood and accepted as useful and not just seen as an external constraint – and that more emphasis is put on the essential aspects (considering the real need for regulation, the appropriateness of the proposed tools, their likelihood of success, the alternatives, and the potential downsides and costs) rather than the formal side (preparing documents and complex cost-benefit assessments).

The UK's system of regulatory budgets depends crucially on the importance of external review bodies, which is another institutional device that we have reviewed. With ACTAL, the Dutch have long been world-leaders in subjecting their regulation to effective external challenge but it comes too late in the process to deal in any way with the RRR. Similarly, even if any of the jurisdictions allowed their courts to review policy decisions on the basis of Better Regulation principles, they would again come too late in the process. We reviewed the role of expert bodies that can provide serious challenge and the French *Conseil d'Etat* can be an international benchmark. It has real authority, based on respect and trust, and has been woven into the governance system over centuries. Countries looking for a "Council of Elders" type of solution to the RRR can learn from the *Conseil d'Etat* – although trying to re-create it within any other system would be an enormous challenge. However, even it can be subject to political override so the UK's Reducing Regulation Committee also has to be considered as part of any effective solution.

#### **v. Improving inspections, enforcement, regulatory delivery**

Finally, we also went beyond the rule-making stage and reviewed that scope for tackling the RRR in its manifestation of calling for more robust enforcement of existing rules, rather than calling for new rules. This manifestation can be equally dangerous but is insufficiently covered in the academic literature. What we found was considerable international evidence that "strict enforcement" (in the sense of a drive for 100% controls and "zero tolerance") does not increase the effectiveness of many regulatory systems and can even be counter-productive<sup>137</sup>. What makes regulatory systems work is the internalisation of their values by those subject to such systems. This comes more effectively from procedural justice than from coercion. Insofar as political calls for more robust enforcement emphasise coercion, they can damage that perception of procedural justice.

But having identified evidence that such political calls for robust enforcement are often counter-productive, we are not necessarily any closer to managing down the instances of such calls. Again, we have to fall back on institutional and process-based solutions which shield the operation of regulatory agencies from political pressures. The relationship between regulatory agencies and their political masters is a complex one and it is difficult to point to international benchmarks of good practice (but not difficult, unfortunately, to find plenty benchmarks of the opposite).

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<sup>137</sup> This can be seen by contrasting risk-based and risk-proportional inspections and enforcement systems with others that strive for 100% control and risk-aversion. In the latter category, there are many examples: criminal justice and policing tactics in much of the USA in the past 30 years, regulatory controls in most post-Communist countries (at least before recent reforms), etc. In the former category, exemplifying the combination of lighter burden with higher effectiveness, much of the inspection and enforcement system in the UK post-2005 (Hampton Review), in Lithuania after the reforms of the last five years, etc.

Even the US system of regulatory controls through OIRA of the Executive branch covers only rule-making and does not shield the regulatory agencies from political harassment over operational issues when anything goes wrong. The UK's Food Standards Agency was created in what was supposed to be an apolitical zone yet it came very close to being abolished through political backlash to its operational methods. There is a limit to how far a democracy can or should exempt any institution from political oversight. Still, the model of the UK's Health and Safety Executive or Environment Agency, with a strong institutional identity and political authority "mediated" by a board of directors, is a useful example. The recent OECD Good Practice Principles for Regulatory Enforcement and Inspections also provide a number of specific directions for improving the way the implementation and enforcement phase is handled, and developing a more effective and efficient approach to regulatory delivery that, on a foundation of strong professionalism, emphasizes compliance promotion and assistance, combined with toughness where needed.

As we finish this report just days from the death of Ulrich Beck, the author of *Risk Society* (Beck 2006), it may be appropriate to conclude this report on a note of qualified optimism in relation to risk, risk perceptions and "risk reflex". Some of Beck's insights appear strongly confirmed by our review (in particular that attempting to dissimulate risks or minimize them is likely to backfire eventually). Much of what Beck emphasized as "risk" however may maybe more correctly be called "uncertainty", and this is what we may have to learn to accept better, and be more open about. Crucially, a better management of risks and "risk reactions" requires transparency, and understanding of trade-offs. This is an important cultural change in many ways, and process rules and institutions will never be enough to achieve it – but they may make a strong contribution to it, if they help create a time and space for honest and open engagement and discussion regarding incidents, crises, hazards and risks.

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