



**DIRECTORATE-GENERAL FOR EXTERNAL POLICIES
POLICY DEPARTMENT**



**GLOBAL CHALLENGES:
NAVIGATING A WAY FOR
THE EU AS A GLOBAL
ACTOR**

AFET

DIRECTORATE-GENERAL FOR EXTERNAL POLICIES OF THE UNION

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POLICY DEPARTMENT

STANDARD BRIEFING

**GLOBAL CHALLENGES:
NAVIGATING A WAY FOR THE EU AS A GLOBAL ACTOR**

Abstract

We live in an age of deep transformation of both the global and human condition. The driving forces are essentially technological, but they have profound ecological and social consequences. On the deepest level, the post-industrial revolutions in science and technology are further multiplying our power to manipulate our physical environment, both by increasing our understanding of the world about us, and by giving us ever more powerful technological and economic development. This can be either good or bad, depending upon how we use our increased power. Here the record from the industrial age is mixed and depends upon one's perspective. Socially some 15% of the world's population - including the EU - have reached historically unparalleled standards of living, while almost all other societies in the world have had their traditional forms of livelihood disrupted and some 20% are now helplessly uprooted. Ecologically the legacy of the industrial revolution is disastrous, but it has also led to advances in science and technology that enable us to address our current problems. Humanity - or the elite portion of humanity to which the EU belongs - is empowered as never before.

This leads to one fundamental long term challenge, and a series of more immediate short term challenges which are analyzed in this paper

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
1 INTRODUCTION	3
2 THE FUNDAMENTAL CHALLENGE	3
3 IMMINENT CHALLENGES	4
4 WHAT IS SECURITY?	4
5 THE FIRST CHALLENGE: UNDERSTANDING THE NEW SECURITY ENVIRONMENT	5
5.1 THE MULTIPLICATION OF POSSIBLE EXISTENTIAL THREATS	5
5.2 THE SYNERGIES BETWEEN DIVERSE THREATS	5
5.3 THE MULTICAUSALITY OF THREATS	6
5.4 THE UNCERTAIN THREAT ENVIRONMENT	6
5.5 POLICY IMPLICATIONS FOR THE EU	7
6 PRACTICAL SECURITY CONCERNS	7
6.1 THE GLOBAL SOCIAL CHALLENGE	7
6.1.1 Policy implications for the EU	10
6.2 THE FUNCTIONAL SECURITY CHALLENGE – FLOW SECURITY	11
6.2.1 Policy implications	12
6.3 OUR FUNDAMENTAL ECOLOGICAL CHALLENGE	12
6.3.1 Policy implications	13
7 CONCLUSION	13
BIBLIOGRAPHY	16

EXECUTIVE SUMMARY

We live in an age of deep transformation of both the global and human condition. The driving forces are essentially technological, but they have profound ecological and social consequences. On the deepest level, the post-industrial revolutions in science and technology are further multiplying our power to manipulate our physical environment, both by increasing our understanding of the world about us, and by giving us ever more powerful technological and economic development. This can be either good or bad, depending upon how we use our increased power. Here the record from the industrial age is mixed and depends upon one's perspective. Socially some 15% of the world's population - including the EU - have reached historically unparalleled standards of living, while almost all other societies in the world have had their traditional forms of livelihood disrupted and some 20% are now helplessly uprooted. Ecologically the legacy of the industrial revolution is disastrous, but it has also led to advances in science and technology that enable us to address our current problems. Humanity - or the elite portion of humanity to which the EU belongs - is empowered as never before.

This leads to one fundamental long term challenge, and a series of more immediate short term challenges which are analyzed in this paper.

1 INTRODUCTION

We live in an age of deep transformation of both the global and human condition. The driving forces are essentially technological, but they have profound ecological and social consequences. (See for instance Toffler, Dickens, Friedman in the attached list of select literature.) On the deepest level, the post-industrial revolutions in science and technology are further multiplying our power to manipulate our physical environment, both by increasing our understanding of the world about us, and by giving us ever more powerful technological and economic development. This can be either good or bad, depending upon how we use our increased power. Here the record from the industrial age is mixed and depends upon one's perspective. Socially some 15% of the world's population - including the EU - have reached historically unparalleled standards of living, while almost all other societies in the world have had their traditional forms of livelihood disrupted and some 20% are now helplessly uprooted. Ecologically the legacy of the industrial revolution is disastrous, but it has also led to advances in science and technology that enable us to address our current problems. Humanity - or the elite portion of humanity to which the EU belongs - is empowered as never before.

This leads to one fundamental long term challenge, and a series of more immediate short term challenges.

2 THE FUNDAMENTAL CHALLENGE

Increased power equals increased responsibility and the deepest challenge we face today is to develop the wisdom to use our increasing power in a way that is sustainable in the long term. In particular we need to reconcile the expanded human condition with our ecological base. As the number of humans on the planet continues to grow, and as ever greater numbers are empowered to consume and pollute, the depletion, degradation and disruption of our global ecosystem is accelerating. While we may disagree over the specifics, it now appears clear that this will have profound and devastating long-term consequences on the very foundations of life as we know it. In the interim it is impacting ever more severely on our existing social and functional structures. The ecological crisis already impacts directly on the societies of the poor parts of the world. In the coming decades it will also become a painful daily reality for citizens in wealthy societies such as the EU.

Here we face two deep problems. Firstly, we still prioritise narrow human interests over broader global ecological imperatives. Secondly, we still prioritise short term gratification over long-term sustainability. Both are understandable since mankind's entire history until the late industrial age has been driven by the effort to secure and improve a fragile and vulnerable human condition. However neither priority is sustainable any longer. Our increased power, combined with our instinct for continuously increased consumption, and multiplied by varying degrees of inefficiency, is collapsing our ecological base. We still need growth, but the emphasis needs to shift towards qualitative and not quantitative growth.

This leads to the deepest challenge of the anthropoid age. Can we subordinate our narrow human perspective to the broader requirements of our global ecological base? It is a deep challenge because it is essentially psychological and it collides with our deepest instincts for individual survival and procreation. As such it raises difficult moral questions over the value of individual human life against broader social and ecological needs. It is also dangerous, since it collides directly with citizens - and hence politicians - short-term concerns. In the EU these are largely job security and greater comfort, but for a significant share of the world's population they are existential. As such it is a highly delicate

challenge since it cannot be enforced; only arise from within ourselves and our societies. As we saw in Copenhagen however, short-term concerns paralyse our ability to deal with the long-term imperatives.

However if we cannot address this issue now then it will address our coming generations with implacable and disastrous force. As a limited global power, with a modicum of influence over world events, this challenge concerns the EU directly. It is also of direct concern to the European Parliament, as a major actor influencing the standards we apply within the EU and in our global relations.

3 IMMINEENT CHALLENGES

On a second level, of more immediate practical concern, the revolutions in information and communications technology are shrinking the world, both socially and ecologically, intensifying the interaction and speed of almost all spheres of human activity (cf. Castels, Baumann, the latest WEF Global Risk Report) and multiplying our economic productivity. This is fundamentally reshaping the global security map. We are leaving the parameters of the industrial age and Westphalian security and entering a new, and largely uncharted, security environment. This is giving rise to several new security challenges. However to understand these it is first necessary to return to first order questions, the most basic being the nature of security itself.

4 WHAT IS SECURITY?

At its core, "security" means functioning vital life systems. For human society these can be divided into two basic categories. They interact intimately, but they are distinct. The deepest vital life system is immaterial, and consists of harmony of spirit, or the ability to find a psychological harmony with oneself, one's surroundings and one's life. This is a fundamental component of security, but is not dealt with here as it is far removed from our more immediate security concerns.

The second deep category of vital life systems is material and consists of three big systems, each driven by different forces but interacting closely:

- The first is the social life system, where security means harmony between sentient beings or societies, or, at its most basic, freedom from fear of violence. This is the domain of politics, in the generic sense of the word as the quest for influence, and its driving forces are the psyche of sentient beings.
- The second is the functional life system, where security means having a sustainable livelihood or, at its most basic, freedom from want. This is the domain of two main activities: economics - providing food on the table; and science and technology - providing a roof over one's head and ploughs in the soil.
- The third is the ecological life system, and consists of finding a comfortable habitat and access to natural resources - and adapting one's life to allow both to continue in a sustainable fashion.

Our security depends on each of these three vital life systems functioning. If one or more of them crash, then we are not only in danger but face extinction. It is also important here to emphasise the definition of threat. This has nothing to do with 'shock and awe', numbers of dead or sensational damage. The real existential threats we face are those that can cause systemic collapse in one or more of the above vital life systems.

The task of security policy in the globalising age is first to ensure that all three vital life systems function harmoniously. This gives rise to four specific challenges. The first is how to understand the new security environment. The next three are how to manage the challenges we face in the three vital life systems. They are dealt with in turn below.

5 THE FIRST CHALLENGE: UNDERSTANDING THE NEW SECURITY ENVIRONMENT

A key element in dealing with any problem is to understand its nature and the potential solutions at ones disposal. Security (or functioning life systems) is highly contextual. Desires, vulnerabilities, threats and responses are all to varying degrees shaped by the prevailing conditions. In the industrial age we had some three to four hundred years to familiarise ourselves with how the prevailing parameters shaped our security environment. Globalisation is now shifting these parameters, and we must relearn what vulnerabilities, threats and responses they shape. This is our basic epistemological challenge. It can be broken down into four key parts.

5.1 The multiplication of possible existential threats

The first is the multitude and diversity of the potential challenges. Existential threats can now emerge rapidly and devastatingly in all three of the security dimensions outlined above. Examples include the Y2K syndrome (a technological challenge in the functional dimension) threatening to crash our technological infrastructure; the danger from a deadly pandemic (an ecological challenge) to society and the global economy; or the current global economic crisis which – unless we get out of it – could collapse the entire post-Westphalian world order. The dangers they present are potentially far deeper and more catastrophic than those currently presented by any traditional state actors or non-state actors such as transnational terrorism or crime.

Their defining feature is that they can cause systemic collapse – i.e. they can disrupt one of our fundamental vital life systems. Our primary analytical task today is thus to become discriminatingly holistic – to broaden our threat perspective from political violence to cover all three dimensions, while at the same time retaining a focus on those challenges that present a real systemic threat and are not merely sensational, full of sound and fury, but signifying nothing. This calls for a broad vision, or a holistic perception of security. At the same time it raises a second challenge of ‘securitisation’. A heightened awareness of ‘menaces a tous azimuths’ must not be allowed to paralyse our societies.

5.2 The synergies between diverse threats

The second epistemological challenge is the need for synergistic vision. This is required because the three dimensions interact intimately. Thus a serious pandemic would initially impact directly on societies through death, dying and fear. Thereafter it could erode our technological infrastructure, if the myriad experts needed to run it were sick, dead or had fled. Simultaneously it would choke global economic flows by restricting the free movement of goods and people. This would in turn ricochet back and hit society with greater scarcity and poverty as the global just-in-time delivery of food and commodities was choked. This would in turn in the worst case lead to economic collapse, with impoverished wealthy societies regressing back to poor, isolated and mutually hostile nation states. This is just one example of many. The point is that our new threats interact dynamically across different dimensions. As a result we need a multidimensional and synergistic perspective that can anticipate how a crisis will cascade and mutate as it ricochets through our vital life systems.

This problem is compounded if several crises emerge simultaneously from different dimensions. Their interaction would generate a complex megacrisis far greater than the sum of its parts, for instance if the current economic crisis were joined by a serious pandemic or a successful terrorist attack targeted against the global technological infrastructure flows supporting the global economy. We can -- perhaps -- just manage the economic crisis on its own terms, but if it were compounded by other crises we would currently almost certainly be overwhelmed.

5.3 The multicausality of threats

The third epistemological challenge is the need for a multicausal perspective. This is needed because each dimension operates according to a partly different logic. The social dimension is the domain of human interaction. It is a highly psychological dimension, driven by political logic, which in essence is the quest for influence. The driving force here is the human psyche. The functional dimension is the domain of human constructions. While these can be intimately linked to the social dimension - notably economics - they are nevertheless subject to a more mechanical linear causality, driven by an engineering logic. The ecological dimension is the domain of extremely complex systems of systems of natural energies, where the systems as a whole still lie beyond human understanding and control. While we now have increasing power to tinker with parts of the ecosystem, piecemeal human interventions have so far generally caused more damage than good. The latter also presents another new challenge. This is the need, for the first time in human history, to limit our own appetite and voluntarily subordinate our desires to the needs of our environment, finding a symbiosis between our livelihood and the demands of the ecosystem.

The net effect is that security analysis now needs to comprehend three different driving forces, and to respect the power and integrity of the forces in each dimension. Attempting to deal with a social problem by using functional logic, or approaching an ecological problem from a social perspective, is doomed not only to fail but to fail dramatically. At the same time however, the analyst must also be able to follow how the different causal logics interact.

5.4 The uncertain threat environment

The fourth epistemological challenge is how to manage uncertainty. The diversification, synergies and multicausality of our security challenges means that our threat environment is becoming far more fuzzy, volatile and unpredictable. This means that the very foundations of our existing methods of dealing with threats are being bypassed by events. For the analyst this means that we can no longer rely exclusively on yesterday's narrow reductionist and linear causal analysis, and even less on the quasi-scientific methods of a significant part of the political science community. While specialised expertise and causal rigour remain essential, they must now be subordinated to a broader perspective that is able to pull together the various threads to form a broad consilient picture of the whole. This will, of necessity, be foggier and less clear than the neat pictures presented in reductionist causal analysis, but it is preferable to attempting to impose an artificial and misleading clarity on our security environment that has little bearing on reality. It will also avoid the delusion that we can see what is coming. (cf. Taleb.) For the politician, this foggy environment presents a very specific challenge. With the number of potential disaster scenarios increasing, and our ability to make any serious estimate of which threats are most likely and most severe becoming more limited, decision-makers risk being overwhelmed and unable to set priorities in the allocation of scarce resources.

For actual policy it represents a paradigm shift. It means that we must complement our existing emphasis on preparing for foreseeable specific crises with a far great emphasis on the ability to react

to the unexpected. In the crises that will emerge in the coming decades the quick and agile will survive, the powerful but cumbersome will collapse.

5.5 Policy implications for the EU

The above has two basic practical implications. The first is driven by the broader and synergistic nature of our new security environment. This means that both our analytical (read academic) and our governance structures need to complement their existing stovepiped orientation with a broad and integrative way of thinking and acting. Narrow expertise is still needed, and still manages day-to-day normal conditions best. However it is no longer capable of dealing with the new synergistic security challenges. For this, a new, higher-level, integrated vision and modus operandi is needed - both with regard to analysis and governance.

The second is driven by the more volatile and unpredictable nature of our security environment. This has two basic practical implications. Firstly, it means shifting from rigid pre-planning to agile improvisation. Secondly, it means shifting from erecting barriers against foreseeable challenges towards developing resilience that can absorb the blows from unforeseen challenges and then recover.

Having observed and worked with both the academic and government sectors over some decades I have no illusions over our ability to make this transformation. However without it we will ultimately be overwhelmed.

6 PRACTICAL SECURITY CONCERNS

In addition to the basic analytical and governance challenges outlined above we face several concrete short-term security challenges in each of the three dimensions. Four deep trends are currently shaping our vital life systems. In the social dimension, a deep transformation of the global political order is underway. In the functional dimension, our economic and technological power is increasing (though this depends on the outcome of the global economic crisis) but is also creating correspondingly more vulnerable and technologically dependent societies. In the ecological dimension, we are entering a rising global crisis.

In addition to these four broad linear trends our volatile new environment also means that we face a greater number of unexpected "Black Swan" events, whose consequences in a deeply interlinked networked world can become more devastating. Certain events may even trigger culminating tipping points, resulting in regional or global systemic collapse. One such development is the current economic crisis, others can be found in the ecological dimension. It is possible to speculate on others but this lies beyond the scope of this report.

6.1 The Global Social Challenge

Our social dimension is in the midst of a transformation away from the Westphalian age. Technology is shrinking the world and increasing the intimacy between global societies at the same time as these societies are being transformed - some for better and some for worse - by the massive intensification and spread of economic activity and productivity.

Socially this has both negative and positive consequences:

- On the positive side economic globalisation has vastly increased the globalising community's economic power. Alongside our increased scientific and technological power this provides us with substantial resources to deal with the problems. It is important to keep in mind that in this

respect we are not bankrupt. However at the same time this increase in power has multiplied the expectations of our populations. Especially in wealthy former welfare societies such as the EU, they now expect almost absolute security and comfort and hold their politicians accountable for this. This generates a massive pressure on politicians to deliver short-term gratification, at the cost of long-term vision. We have the skill and the tools, but our will is held hostage by short-term concerns.

- Secondly, economic globalisation is lifting a significant share of the world's population from deep poverty to agreeable standards of living. Over the long term this reduces latent social tensions and enhances peaceful political relations, at least within this comfortable community. However in the short term the transformation itself entails significant instability. This is most evident in the rapidly emerging societies, but also affects the world's wealthy societies, such as the EU, as they struggle to adjust to the new global economic realities.
- Thirdly, the information and communications revolutions are leading to a global cross-fertilisation of cultures, societies and individuals. A negative consequence is that this homogenises our cultural diversity, impoverishing our global cultural heritage. On the positive side the new interconnectivity is boosting creativity and knowledge, giving birth to a new networked civilization and new cultures.
- Fourthly, economic globalisation is also leading to a global geopolitical power shift, as major new economic powers emerge alongside the great powers of the Westphalian age. This can be positive if old and new powers become cooperative stakeholders. If however it leads to a new form of multipolar zero-sum power politics then it can present a massive geopolitical challenge.
- Finally, on the negative side, world society remains deeply divided between rich and poor. As global social intimacy increases this is generating massive socioeconomic strains between the strata of rich and poor societies. Socially, we now live in a global village, but it is a village on the verge of revolution. The tensions this gives rise to - from terrorism to proliferation to organised crime to uncontrolled migration - are all linked to this new global political fault line. If politics in the Westphalian age were dominated by the horizontal Great Game between the elite states, they are now dominated by the vertical tensions between different strata of global society.

In terms of political conflict, the above trends are shifting the political fault lines generating violent confrontations away from yesterday's horizontal peer competition between elite states and towards the vertical tensions between different global socioeconomic strata. While the elite community of stakeholders is increasingly integrated and peaceful within its confines, the poorer disenfranchised strata below contain increasingly explosive tensions. At the same time the two live in ever greater intimacy. Metaphorically we see a shift from yesterday's aristocratic contests between knights on horseback towards today's global class tensions.

Elaborating on Robert Cooper and Thomas Friedman, and simplifying greatly, the global political map can today be divided into a hierarchical class society consisting of six layers in three broad categories:

		Example	Share of world pop
Globalizers			
TNC	Transnational Corporations	Fortune Global 1,000	0.1%
PMC	The Postmodern Community	OECD +	15%
Transformers			
RTS	Rapid Transition Societies	China, India, Brazil	5%
SMS	Struggling Modern States	Much of the Arab World	10%
Alienated			
AMS	Alienated Modern States	North Korea, Burma, Russia?	5%
PMS	Premodern Societies	The Bottom Billion	65%

The globalizers are the principal stakeholders in the political, economic and social world order that emerged with the collapse of the Cold War. They include the Transnational Corporations (TNC) and the Postmodern Community (PMC) of leading states and their societies (OECD +). The EU is squarely part of the PMC. These represent the wealthiest, and, until very recently, most powerful societies in the world. Their worldview is dominated by a non-zero sum mindset.

The Transformers identify with the globalising world order to varying degrees. The Rapid Transition Societies (RTS) have the strongest links. Their rapid economic and social development make them the big success stories of economic globalisation (China, India, Brazil +). Their deep dependence on the globalising economy make them very strong economic stakeholders, the increasing living standards of a significant part of their societies make them emerging social stakeholders but their deep domestic instabilities and in some cases political legacy make them only partial political stakeholders. However their political roots in the zero-sum mindset of the Westphalian age is strongly tempered by their economic integration and dependence upon the globalising world. More ambiguous are the Struggling Modern States (SMS). Their régimes generally would like to develop along the globalizers model but their practical ability to do so is limited to a greater or lesser degree. Their practical integration in the globalising world is thus more limited, at the same time as they are beset with greater domestic problems.

The Alienated include the Alienated Modern States (AMS). They are regimes that consciously do not identify with the globalising model either politically or economically. Extreme examples are North Korea or Burma, but the policies of the Kremlin also increasingly raise a question mark in this respect. These regimes at best possess the trappings of early industrial age power - authoritarian rule, crude heavy industries and brute military force - and are dominated by a zero sum mentality. Right at the bottom of the global strata are the very poorest Premodern Societies (PMS). These are regimes with very little power and parts of the world with very poor and often desperately miserable societies. They have an enforced alienation caused by their extreme poverty. At the same time, it must be said, their misery is often caused not by poverty itself, but because the foundations of their traditional lifestyles have been removed under the industrial age and by the rapid and pervasive onset of globalisation.

6.1.1 Policy implications for the EU

While this is a vastly oversimplified picture of the global socioeconomic map it presents the essence of the problem. The political tensions in the world today largely result from the strains between these global socioeconomic strata. Each of the layers presents a different challenge. They give rise to six overarching parallel strategic agendas:

- With the TNC we need to develop a closer symbiotic relationship in steering globalisation. The TNC wield ever more economic and technological power, from which other forms of power eventually flow. They are thus increasingly important global actors not only economically but also politically. At the same time they need the leading states, both to provide favourable global political conditions for them to operate in, but also to regulate their own behaviour.
- Within our own PMC we need partly to ensure that our dominant global system does not collapse from within - witness the current economic crisis - and partly to unite and develop a joint strategy for dealing with our shared external global challenges. Domestically, we face the challenge of maintaining economically competitive societies in the face of the RTS's. The demands this places on EU citizens can be unpopular and lead to domestic strains. In terms of global governance it means that the OECD states need to forge a deeper political coherence. From a more immediate perspective it means forging a closer Atlantic partnership (For a detailed list of specific recommendations see *Shoulder to Shoulder*.) For the EU it means to develop a strong joint stance on key strategic issues. Today one is hard pressed to find any issue of any significance on which EU members stand united. Short term national agendas continue to dominate over our common long-term strategic needs.
- Regarding the RTS we face a dual challenge. Firstly, to continue to accept and promote their integration in the globalising economy. Firstly because the global economy depends upon this and we all become better-off as a result. Secondly, because economic interdependence is the single most powerful means of ensuring that they become political partners rather than rivals. It generates shared vital interests, it makes the cost of violent confrontation prohibitive, and it creates more affluent societies with less risk of violent national chauvinist pressures. In a sense this is the global 'European Coal and Steel' agenda, and by and large it has been successful, though whether by default or design is open to question.
- On the other hand we must also face three realities. Firstly that political gaps between the PMC and the RTS still remain, and can, if ignored or mismanaged, lead to confrontation or coercion. Secondly, that we will increasingly have to share economic and political power with the RTS. They are now already leading global economic actors and they are becoming leading political actors. The April 2009 G20 meeting was only the first step in this process and its management will be a key strategic task in the second decade. Thirdly, that a satisfactory global political partnership with the RTS cannot be achieved through Soft Power alone. While important, it does not confer the degree of respect necessary for serious partnerships to evolve. Being too soft can be just as disastrous as being too hard. Developing the correct balance is the EU's global power agenda, and we have so far failed abysmally. With no common will and no common strategies the EU today has no political or military standing in the world.
- The agenda vis-à-vis the SMS is to assist them, both economically and with their security, in order to help them become RTS's and stakeholders in globalisation. The regimes thus acquire shared vital interests with us, at the same time as the increased affluence of their societies removes the pressures from terrorism, organised crime and uncontrolled migration. The reality

here is that this process is slow at best and in many cases appears to be stagnating. However it is critical. If it fails these societies and their regimes risk becoming increasingly alienated from our vision of world order and joining the rank of hostile disenfranchised opponents.

- The AMS consist of states run by regimes that are actively alienated from the PMC and see our globalizing system as a threat. The task here is to convert them if possible and, failing this, to manage the challenges they present to the globalizing world. This includes state-sponsored terrorism (including cybersabotage), the acquisition of weapons of mass destruction and pressures on the access or flow of critical raw materials (for instance oil). This will require a capability for asymmetric but hard power politics, including global military power projection on a scale beyond that required for peace support operations. Today only the United States has this capability. These regimes, and non-state religious movements, can also present an ideological challenge to the legitimacy of the globalising stakeholders. This revolves largely around whether we can improve the living conditions for the societies in the SMS and PMS. If we fail, then alienation and hostility towards us will increase. Both on a global scale, but also, increasingly, among a portion of their Diasporas living within our societies.
- Finally the miserable living conditions in much of the bottom-tier PMS generate a host of transnational problems. These include refugee flows, uncontrolled migration, organised crime and regional instability which can threaten critical global flows, such as piracy. The root causes here are the disrupted societies, and the task is essentially state building. The problem is that this is a slow process at best, very difficult to accelerate (regime change can make the problems even worse) and in some cases cannot be influenced from outside at all. Current indications are that we are losing this struggle. Over the last few years the living conditions of the 1.2 billion poorest have deteriorated significantly, while some 400 million have improved. This is also borne out by the difficulties involved in meeting the UN Millennium Development Goals. While this does not mean we should stop trying, it does indicate that we will face the problems from these societies for a long time to come.
- In the coming decades, the strategic task of the PMC, to which the EU belongs, is twofold. On the one hand to protect the world order to which we gave birth during the Cold War and which shelters and nourishes the globalising world order. On the other hand however we must also act as midwife for the new political system that is emerging under globalization, with the rise of new actors, new global societies, a new technological and ecological environment, and new power relationships. If we do it right we could see the rise of a new globalized system, offering greater integration, stability and well-being for both humans and the ecosystem. If we do it wrong we risk collapsing into an impoverished and violently multipolar world of conflicting societies struggling to survive in a deepening planetary ecological disaster.

6.2 The Functional Security Challenge – Flow Security

The positive deep trend in the functional dimension - assuming we weather the economic crisis - is that we are constantly gaining more economic and technological power. On the other hand however, our increasing urbanisation and dependence upon a highly complex economic and technological infrastructure, and their interconnectedness, makes us far more vulnerable to catastrophic crashes in the functional dimension. This challenge is called Societal Security in the EU and Homeland Security in the United States, but it is best summed up in the concept of "flow security." How are we to ensure that the vital social, economic and technological flows on which globalised society depends, can be kept flowing? This includes, first, optimizing and protecting the global flows themselves. Second, it means developing a functional network and base that is resilient

enough to permit urbanized post-industrial societies to recover from the shocks and catastrophes that will almost inevitably afflict us.

6.2.1 Policy implications

Flow security is critical in this respect and respects a deep shift in our thinking. In the Westphalian age, security largely depended upon defending state borders and protecting the political and economic systems within these. Our focus then was very much on structures and barriers. Today our security is increasingly dependent upon global transnational functional flows. Optimizing and protecting these flows and their critical nodes will be the main security concern of the globalization stakeholders (TNC, PMC and RTS) by 2020, for the very practical reason that if these flows fail, then everything else will collapse. Challenges include friction (piracy, crime, corruption), shocks (regional instability, terrorist strikes against critical flows or nodes, operations by alienated regimes, earthquakes), strangling (pandemics) corrosion (poor design or maintenance) and so forth. Protecting flows will require global military policing capabilities (protecting sea lanes and critical nodes, etc.) and some power projection (preventing choke operations, managing regional instability). It will also call for complex cross-government cooperation and very close cooperation between the private and public sectors.

For societal support, technological advances will probably lead to more resilient societies in the long run, but by 2020 PMC societies will remain urbanized and vulnerable. Military tasks here will largely be of the default category - assisting civil societies contain or recover from major disasters. As societal vulnerability increases this support task of the military -- or ideally parallel civilian disaster management organizations -- will become more important.

6.3 Our Fundamental Ecological Challenge

Finally, the ecological trend is a descent toward an ever deepening global crisis. This is more than climate change. It includes the depletion of non-renewable resources (oil, minerals), degradation of regional biotopes providing renewable resources (water, fish, arable land) and disruption of the global ecosystem (climate change). The three trends are distinct even if they are closely interwoven. They can have a variety of security consequences:

- Scarcity of critical raw materials will impact on both our social and functional security: increased prices can affect the global economy; scarcity of immediately vital commodities such as food can lead to social unrest; depletion of traditional forms of livelihood can lead to criminal activity (piracy) or migration; the control of scarce resources can be exploited for political extortion between states; and in the worst case the quest for access may lead to forceful power-political efforts to gain control of areas with vital commodities. Here the rising importance of the Arctic, both for natural resources and as a major potential shipping route between North Asia and the North Atlantic, is of particular concern for the EU.
- Climate extremes can damage our critical infrastructure, from extreme storms such as Hurricane Katrina, to specific recurring crises such as flooding or extreme heat.
- Climate change can lead to human migration. This is already taking place in the poorer parts of the world as a result of desertification, but could also become a reality for the southern parts of the EU. In these areas water scarcity can become a fundamental problem for established societies, and combined with extreme heat can also lead to other dangers such as firestorms. This is already a reality for countries such as Greece and Australia and in California.

As a result our citizens and voters will become increasingly affected and upset over this issue. The result will be that ecological security will rise to become one of the top issues on the political agenda. In the coming decades it is likely that universal ecological values will generate far greater clashes with the sovereignty principle than universal humanitarian values do today, with an increasingly severe conflict between states insisting on the need to protect vital global eco-assets, wherever they are, and states insisting on their sovereign integrity.

6.3.1 Policy implications

Our primary strategic task here is to limit and reduce the ecological crisis. This includes several policy lines:

- Firstly, the scientific challenge of understanding the problem and how to deal with it.
- Secondly the multilateral political challenge of achieving a broad (or narrow) consensus on how to regulate our behaviour.
- Thirdly the closely related domestic political challenge of generating the political will to take the difficult decisions needed to implement our perceived solutions.
- Fourthly, the technological challenge of introducing more environmentally friendly technological solutions. With the help of market forces this could be one of the easiest to implement.
- Fifthly, the psychological challenge of societies willingly restricting their consumption and pollution.
- Sixthly, but not least, the policing and possibly military challenge of verifying that ecological norms are respected and enforcing them when needed, in the worst case using force.

The future use of violent force for ecological ends could be driven either by the protectionist agenda, to protect critical ecological nodes, but also by a more desperate need to ensure access to critical ecological assets.

Two major conflicts can emerge on this level: Firstly between universal ecological values and state sovereignty; Secondly a conflict between universal ecological values and the notion of human security. Or to be more specific, the notion of individual human security, as it is conceived of today.

7 CONCLUSION

In the coming decades our security challenges will be more diverse and more severe. They will focus on at least six critical tasks. They are, in order of importance:

1. Flow security - protecting global and domestic technological and economic flows. This will become our number one priority since it is the primary underpinning for the survival of our societies and hence the emerging global political order. At the same time our vulnerability to breaks in these flows will increase, even though new design concepts and technologies will introduce greater resilience. Flow security requires the very close interaction between the business, government and scientific communities. For the military it calls for a wide range of capabilities, from regional power protection to keeping sea lanes open to highly technical intervention capabilities. It also implies a very close integration of military capability with the technological and business community.

2. Ecological protection - the global policing and enforcement of ecological norms. As the global ecological crisis grows its impact will become ever more acute, raising ecological security to the top of our political agenda. This will multiply the intensity and scale of our efforts to protect the environment both at home but especially globally. This will rest on multilateral or unilateral decisions on how best to protect the environment, but these will require a host of regional and global policing and enforcement capabilities, including -- in the worst case -- robust power projection.
3. Barrier operations - shielding the global rich from the tensions and problems of the poor. As the ratio of the world population living in misery and frustration will remain massive the tensions and spillover between their world and that of the rich will continue to grow. Current trends indicate that our efforts to solve this problem at its root -- by curing the dysfunctional conditions prevailing among some 60 percent of the global population -- are likely to fail in a significant share of the world. If so the need to strengthen our barriers against the spillover of misery will grow. This is a morally distasteful losing strategy, but will be unavoidable if we cannot solve the problems are their root
4. Global Social engineering - stabilization, conflict resolution and state-building efforts. This addresses the core of the global social problem, but the lessons of our efforts in recent decades indicate that the difficulties vastly exceed our capabilities. Both the UN Millennium Goals and our state-building efforts are floundering, at the same time as our will and resources are becoming overstretched. Hence the priority and ambition of this mission may well be scaled back over time. That would be serious, since it means the problem itself will grow, increasing global class tensions and their spillover in various forms, and increasing the need for barrier operations.
5. Hard power politics - the traditional Clausewitzian quest for influence, in this case towards alienated regimes. Some alienated states will no doubt still exist for some time to come -- the key uncertainty here being the Kremlin. If so we will need to retain a capability to meet their deliberate challenges to our vision of the world order. This will continue to require hard military power, since they will resort to this if they believe they can get away with it. Hence maintaining overwhelming conventional superiority is essential for the globalizing community. However, this will also require an increased focus on asymmetrical forms of destruction, since the alienated regimes will seek to counter our conventional superiority -- as long as they perceive we have it -- through other means. Currently the focus of the alienated regimes is on maintaining or acquiring weapons of mass destruction as a means to deter the globalizing community. The critical importance of the cybersphere -- and the opportunities to inflict massive damage through it -- will make this a principal technological battlefield for asymmetrical dominance.
6. Societal support - efforts to assist society cope with various functional disasters. As post-industrial society becomes more dependent upon a complex functional base, and as urban society becomes less self-reliant, the potential for societal disasters will increase. This will be reduced over time as we introduce technologies, designs and social structures that increase our functional resilience. However during the transitional period, which will last well past 2020, we will be increasingly vulnerable to major disasters. In many cases the military will have the only improvised emergency resources available. This will call for an ability to improvise rapidly, to adapt military assets for rapid assistance for societal assistance, as well as an ability to operate smoothly together with civilian authorities and within the own society.

This is a wide and daunting range of missions and capabilities but it reflects the range of security challenges in 2020. It implies not only new orientation, organization and capabilities, but also a growing need to interact with an increasingly diverse spectrum of non-military actors. Such interaction must occur first within individual states, between the military and other government agencies. Second, it must occur with other states, since no single state will be capable of the managing the spectrum and scale of challenges unilaterally. Third -- and perhaps most important -- it must occur beyond the state, with the transnational business community, scientific community, NGOs and civil society.

Finally, the above is almost certainly not a complete agenda. Unexpected new events and twists will emerge to which we will have to adapt. However what is certain is that these challenges present an existential threat to the globalizing world and that the EU will have no choice but to address them.

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