



ACCURATE SCENARIOS
ACTIVE PREPAREDNESS
MULTI-SECTOR PANDEMIC PREPAREDNESS

ASEF PUBLIC HEALTH NETWORK

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The project is based on the active contribution of a number of participants from multiple sectors that have a stake in pandemic preparedness across Asia and Europe. As a result, the ASEF-ASAP scenarios are rooted in stakeholders' needs and perceptions. This guarantees the necessary relevance of the scenarios for a broad range of actors who will be involved in effective future pandemic preparedness.

The contributions and enthusiasm of the participants in the ASEF-ASAP panel were the backbone of the project. ASEF is grateful for the energy, dedication and commitment that all contributors have shown in this process.

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INTRODUCTORY REMARKS

With the outbreak of the influenza A (H1N1) virus in 2009, our traditional perception of pandemics underwent a major shift. Asia and Europe learned that diseases that can rapidly spread worldwide are not necessarily lethal. Billions of dollars can be spent on preparing to curtail a pandemic that turns out to be relatively mild.

However, this experience should not make us complacent about the nature of pandemics. Influenza A (H1N1) was a wake-up call: Asia and Europe need to be better prepared for future pandemics. That said, how do we know what they will be? How should we prepare to face them?

These are questions that the ASEF-ASAP (Accurate Scenarios, Active Preparedness) project aims to address. With support from the Government of Japan, the Asia-Europe Foundation (ASEF) initiated a multi-sectoral pandemic preparedness and response project. Managed by the ASEF Public Health Network, the project used the scenario approach to identify a range of pandemics that could occur within different future contexts.

In 2010, ASEF constituted a panel of high-level stakeholders from across Asia and Europe, who identified and analysed driving forces, trends, uncertainties and discontinuities for pandemic preparedness. This panel comprised representations from ASEM governments, the private sector, civil society organisations and the media.

Through a series of scenario-building workshops, three possible scenarios for the future of pandemic preparedness and response were developed: Grey Paradise, MosaInc. and GloCal Blocs.

SCENARIO STORIES IN A NUTSHELL

GREY PARADISE

In Grey Paradise, Asia and Europe are governed by global political structures with redistributed resources and centralised control of the economy. Asian countries, fuelled by continued economic expansion, gain more power and increasingly dominate the international scene. Authoritarian governance becomes a global role model, allowing for progress in many areas. However, it also evokes increasing dissatisfaction among large sectors of the population, leading to protests and apathy. This results in blind spots for new pandemics, problems with multi-drug resistance, and new forms of widespread psychological illnesses and phenomena.

MOSAIC.

Mosaic. describes a future in which Asia and Europe's political structures weaken, resources become commodities and economic self-interest takes centre stage. In a series of economic, natural and human crises, political structures fail to provide effective responses. People turn to self-organisation. Civil society organisations and businesses start to provide public services that are no longer provided by state institutions. The dispersion of power leads to corporations becoming the strongest players. Open and globalised markets and segregation in society are features of this innovation-rich future that is challenged by health inequalities and security problems. Traditional infectious agents re-emerge amongst less affluent societies. Also, cybernetic viruses may become the cause of future pandemics among the affluent.

GLOCAL BLOCS

GloCal Blocs shows Asia and Europe developing in a world of political blocs of states. They use resources for their own development while following their respective regional economic interests. Between these blocs a mix of co-operation (within blocs) and competition (between blocs) develops. Conflicts are imminent. Food becomes a central element in the new power struggle. The various blocs might respond very differently to pandemic threats and have very different means to fight them. Limited co-operation and miscommunication between blocs may lead to lockdowns and spread of diseases.

WE NEED TO BE PREPARED FOR ALL THREE SCENARIOS

The three ASEF-ASAP scenarios are *not* predictions. Neither are they visions of what is desirable or undesirable. What each scenario does is to describe a possible future development. *Together* they aim to capture the everything that may be relevant for pandemic preparedness.

As the next step, the ASEF-ASAP project uses the three scenarios and their analyses to develop robust strategies for multi-sector pandemic preparedness and response. Emphasis is given to ensuring that the relevant actors in Asia and Europe collaborate to ensure societies are well prepared for future pandemics.

PANDEMIC THREATS AND PREPAREDNESS

THE NEED FOR A CREATIVE APPROACH

Are we prepared for future pandemics? Even as we enter the second decade of the 21st century, the answer to this question still remains negative.

Three pandemic outbreaks in the last ten years have resulted in a rapid expansion of the pandemic preparedness architecture. Both Asia and Europe have come a long way in targeting influenza viruses, for example. Despite differences in their nature and scope, most countries have now established at least minimal pandemic preparedness and response plans through international co-operation. However, the 2009 A/H1N1 influenza pandemic clearly showed us that there is much room for improvement.

The next pandemic may not come in the form of an influenza virus. However, most of our preparedness and response systems focus on influenza. Second, preparedness systems still largely fail to reach beyond state authorities. Involvement of other sectors of society will be vital to a swift and successful response.

Finally, and perhaps most importantly, our current preparedness and response systems only consider one future context. The same holds true for most of the foresight studies on pandemics that have been conducted to date. Possible changes to the structure of our societies in the future have hardly been addressed. What if governments lose the authority they need to coordinate a unified and effective response to an epidemic?

The 2009 experience has taught us that international pandemic preparedness and response systems are poorly prepared for multiple and diverse realities, while history teaches us that hardly any pandemic outbreak is ever similar to another.

Asia and Europe need to adopt a more sophisticated approach that captures the differences in scope and nature of pandemics, the diversity of possible agents and the possible future directions of our societies. This holistic approach will enable a more flexible, efficient and effective use of resources.

Working towards this purpose, the ASEF-ASAP project has attempted to do this through a scenario-based exercise where each future scenario tells a distinct story about an imaginary, yet specific, relevant and plausible context for future pandemic preparedness. These future settings provide a testing ground for checking existing plans and approaches and for developing new and targeted actions.

It is important to note that these scenarios do not aim to predict the future. None of the scenarios will materialise in exactly the way it has been described. However, when viewed as a whole, the three scenarios include all the elements that the future may bring. If actors across Asia and Europe prepare for all the scenarios, they will be better prepared for the future, whatever shape it may take.

Described on the following pages are the storylines of the three key scenarios – covering the period from 2010 to 2040 – in a narrative that combines and concentrates the vast amount of possibilities into a set of tangible futures.

2010

2020

2030

2040

01 GREY PARADISE



GLOBAL RESPONSE: THE ONLY OPTION TO GLOBAL CRISES

Continued pressure from financial markets makes it obvious that European solutions alone will not be sufficient. Asian governments will need to take on more responsibility.

In the second decade of the 21st century, Asia and Europe are starting to become accustomed to global crises. The financial crisis that started in 2008 continues to have strong repercussions. In response, EU leaders are gradually seeking to deepen the integration of financial policies in order to avoid further breakdown and safeguard economic stability.

Meanwhile, the economic and political influence of Asia continues to rise. Asian governments are also more interested in creating a stable international financial architecture. Continued pressure from financial markets makes it obvious that European solutions alone will not be sufficient. Asian governments will need to take on more responsibility.

Environmental degradation is also taking a toll. Galloping industrialisation in Asia is placing a serious burden on the region's health systems. Across Asia and Europe, extreme weather events — such as droughts, floods, massive snowfalls and heat waves — all fostered by climate change, continue to devastate societies. Environmental migration places further pressure on already strained societies.

Governments worldwide increasingly, albeit reluctantly, accept international co-ordination at the expense of national sovereignty. It is the Asian states, however, that are decisively pushing for a more global approach to tackling crises. Economic turmoil has weakened the position of the United States and Europe. An impetus is thus provided to create new international regimes with tight control over power.

Over time, financial markets stabilise. Environmental degradation in Asia slows down and, in some cases, is even reversed. A tighter grip on international co-ordination leads to solutions to some of the world's longest-standing conflicts, such as in the Middle East. African countries stabilise and their markets open up. The results of international governance are favourable to some Asian countries. Their economic credit is translated into decision-making power.

Asian world leadership provides different solutions to many of the world's problems. Nuclear energy becomes the dominant source of energy. With rising Asian technological solutions for energy, the use of fossil fuels comes under tough international regulation. In order to cater to the world's food demand, international regimes agree on large-scale changes in agricultural production. The genetically modified (GM) crop industry is booming, with newer, faster growing crops and animals. Farming communities become more sensitive to zoonosis.

Given the importance of health for the global system, international regimes establish global healthcare systems. This goes hand in hand with basic education initiatives and new requirements for health education and training in behavioural change, which leads to more access to basic healthcare. The improvements in healthcare and education lead, initially, to population growth and eventually to better control of major communicable diseases and decreased fertility rates in developing countries.

CHALLENGES FOR A WORLD UNDER TIGHT INTERNATIONAL CONTROL

Asia-dominated global governance is not without its side effects. With large-scale development across Asia, many of Europe's top talent relocate due to more interesting challenges and opportunities in booming Asian cities than in stagnating Europe. Asian cities in turn become increasingly crowded.

With basic health services available to many, and other basic needs met, average life expectancy now exceeds 90 years. The proportion of the elderly in societies has risen sharply; so has the number of elderly suffering from dementia. Having such large numbers of citizens who depend on state resources, but are unable to contribute to them, poses massive problems. Euthanasia becomes legalised and is applied widely. "Obesity: Our new plague?" is a frequent headline in the main electronic news media. The tightly controlled way of life is making people disenchanted. Many flee from what they call "grey paradise" into virtual worlds where free space is abundant. Among youth, there are striking cases of group suicides co-ordinated via social media, or "flash-mob self-euthanasia".

Meanwhile, the global governance system suffers from increasingly Byzantine bureaucratic structures. Business people complain about the inefficiency of governmental systems. Other parts of societies wonder if the way chosen really is the right one. By 2035, Individual Freedom Day, launched as a virtual event by computer hackers in the Philippines in the mid-2020s, has developed a massive following across the world. Groups of minorities call for autonomy and independence. Autarchic groupings try to disconnect from cities in their attempt to flee the grip of authorities. New religious groups that have mushroomed throughout the 2020s and 2030s now demand an end to human cloning and genetic manipulation. As 2040 approaches, Grey Paradise is on shaky grounds.

02

MOSAING.



THE EROSION OF TRUST IN GOVERNMENTS

A series of disasters and the failure of governments to deal with them lead to a profound shift in priorities.

In the aftermath of the economic crisis of 2008–2009, the world runs into even more serious economic trouble. Following the erosion of trust in the Euro zone and its inability to function properly, a second economic crisis hits Europe and the United States. This second crisis surpasses the first one in severity. People in Europe start to lose their confidence in banks and in the stock market. This leads to calls for strong, decisive measures by the EU. Asia is not as badly affected as Europe, although it is affected by the loss of purchasing power in the United States and Europe.

The economic crisis is not the only kind of crisis faced by the planet. Natural disasters have become more frequent in the early 21st century and the trend will continue. Throughout the first three decades of the century, floods, global warming, high concentration of greenhouse gases, heat waves and droughts further accelerate the depletion of natural resources. Food production and food security are affected and prices rise sharply. This situation, in turn, fuels covert and open conflicts throughout Asia, the Middle East and Africa.

People in Europe and Asia call on their governments and the EU to counter the effects of the crises. The EU, however, finds it more and more difficult to act in a unified manner. With sharply rising costs, more EU member states run into serious financial trouble. The more stable EU economies grow weary of the pressure to repeatedly bail out weaker states. Calls for re-nationalising many policies become more urgent. Effectively, the EU becomes a two-tier system, with the economically weaker countries in the second tier forming a much looser affiliation. The same happens in the ASEAN region, whose influence wanes across the continent.

A series of disasters and the failure of governments to deal with them lead to a profound shift in priorities. State funds for development assistance to poor countries are cut sharply. Funding for international and regional bodies as well as UN agencies is withdrawn or markedly reduced.

A PROFIT- DRIVEN WORLD DOMINATED BY PRIVATE COMPANIES AND CULTURAL GROUPINGS

The failure of governments and international institutions in Asia and Europe creates a void; public services, including healthcare, are reduced across the board. In 2021, the bulk of existing healthcare systems within Europe have shifted towards private healthcare initiatives. Asia moves even further towards private healthcare. The commodification of healthcare services and goods — along with other public services — creates new market opportunities. Health companies stock vaccines and antivirals on behalf of multinational corporations. This leads to greater disparities between poor and rich populations.

Private companies and enterprises demand more control over society and more exceptions from existing rules and regulations codified and enforced by public authorities. Companies make use of the fact they are the ones that generate capital and employment to exert stronger influence on policy-making. They become less and less bound by environmental, tax and labour regulations. This increases the risk of environmental exploitation, ecological abuse and inequalities. It also increases opportunities for innovation and economic development.

This development is fuelled by the economic success of corporations. Many corporations in Asia provide services to large numbers (including the less affluent), while exploiting economies of scale and the laws of large numbers. Mergers and alliances lead to globalised businesses and fierce competition, yet hardly any with national ties. Corporations take over global governance. Profit pushes research and development (R&D) and innovation, which is now market-driven (focusing on high-paying market needs) and not necessarily need-driven (responding to unmet basic human needs). E-health solutions become widespread, enhanced by technological breakthroughs.

STRONG DISPARITIES AND A GROWING NEED FOR COMMON APPROACHES

Asia and Europe are faced with growing internal differences. More and bigger megacities emerge, and the disparity between urbanised and remote areas grows. Despite more effective food production due to industrialisation and distribution by corporations, the problem of equitable world food supply is not entirely resolved. The share of alternative sources of energy continues to increase, but the burden of the energy sector on the environment is still heavy.

These disparities add to the gap between the rich and the poor. Poorer areas in Asia and Europe are increasingly left to their own devices. Some start to develop alternative ways of living, often reverting to traditional practices or developing new social approaches. Many such areas, however, become a fertile breeding ground for crime and corruption. This also affects more affluent areas, which experience smuggling of goods and people, theft and robbery. Illegal powers start to run certain areas. In some areas of Asia and Europe, conflict escalates and leads to violent clashes, sometimes involving the remnants of military forces.

Companies in Asia and Europe have already taken over many formerly public services, but this adds a new dimension to the problem. Companies develop more extensive care and security systems for their clientele and employees. They take on an increasingly social role in society, teaming up with and supporting cultural groupings. The pressure to tackle imbalances on all fronts leads to broad calls for more co-ordinated and common approaches. Large companies, cultural groupings and the few remaining governmental structures create collaborative agreements as a new form of societal regulation to tackle problems. However, implementation remains a problem. Towards the end of the 2030s, many wonder to what extent these can tackle the growing unrest in Asia and Europe.

03 GLOCAL BLOCS



SCARCITY AND COMPETITION LEAD TO GLOCAL BLOCS

With new industrial capacity and sharply rising domestic and international demand in emerging markets, countries in Asia and Europe often find themselves on opposite sides of a battle for natural resources and scarce materials

Asia and Europe are part of a global drive to generate more wealth. Asia, in particular, makes impressive progress in developing its economic power, boasting strong and even double-digit growth in many countries. With new industrial capacity and sharply rising domestic and international demand in emerging markets, countries in Asia and Europe often find themselves on opposite sides of a battle for natural resources and scarce materials.

Faced with such fierce competition, governments in the EU move closer together, by pushing forward Europeanisation. Many countries in Asia do the same through supranational regional bodies. The rising competition for food and for more advanced food products becomes a key concern and a central element of power relations in Asia.

Governments within these blocs find their own answers to balancing economic, environmental and developing needs. In Europe, environmental concerns are high on the agenda. In Asia, the situation is quite diverse, with many countries clearly putting development first.

While the EU is debating whether or not to open its borders to more migrants with higher education, Asian blocs are attracting and selecting migrants who can support their economic development.

The competition between blocs is accelerated by technological progress, R&D and innovation. Advances in the health sciences are inadvertently boosted by emerging diseases that bring about advantageous budget allocations. An increasing number of countries rely on nuclear energy as a transitional source of power because of the effects of climate change and the depletion of natural resources. There is much competition in R&D between the regions, but also selective co-operation where there is a clear advantage for both sides.

“CO-OPTION” BETWEEN BLOCS FUELLING PROSPERITY AND CREATING CHALLENGES

Co-operation and competition between blocs, widely known as “co-optition”, fuels development and prosperity, particularly in many Asian countries. Growing environmental problems increase the alienation of people from nature in many countries in Asia and also in European societies.

Nonetheless, there are still some differences between the Asian blocs. Some blocs focus on economic development, whereas others target broader co-operation. Faced with ever-stiffer global competition, the EU is taking decisive steps to further integrate into a United States of Europe.

In many of the more successful blocs, basic healthcare dispensed by the state is accessible by everyone. Highly specialised services are only available to the elite through private healthcare systems. As a result of continuous R&D, medical treatment of more exotic disorders becomes possible through genetic mapping. Evidence-based traditional medicine from within the distinct cultures of the respective blocs is on the rise.

In Europe and Asia, co-optition has also created new challenges to cultural identity, which in turn affect how migration is treated within the blocs. Often, migrants from outside the blocs are perceived as a threat to this identity. Many migrants in Asia live in separate pockets in cities with a distinctive culture of their own. The same holds for many parts of Europe. People inside these pockets are often marginalised, poorly integrated with society and lack the health services available to the rest of society.

TENSIONS TURNING INTO VIOLENCE

The problem of scarce resources in Asia and Europe is not easing. In terms of food, Asians have turned increasingly to meat consumption. In Asia, genetically modified (GM) food is widely used to respond to increasing demand. Contract farming has largely replaced traditional agricultural practices in Asia. For a long time, Europe held off modernisation of food production, focusing more on its own production of organic food and compensating the lower yield with increased food imports. This approach, however, comes under pressure from tougher competition for food resources. As the effects of climate change begin to manifest themselves, water is increasingly seen as a scarce and valuable resource.

As a result of changes in diet and food production technologies, people's immune systems weaken and become more vulnerable to germs. Increased consumption of processed food results in diabetes becoming a major problem. Sugar and fat replacements show long-term negative effects.

Health research reaches new frontiers. Genetic mapping opens the way for genetic treatment of the foetus. This in turn leads to new forms of discrimination regarding the perceived superiority or inferiority of genes. Some blocs start to experiment in using this knowledge to gain a competitive edge.

Competition reaches a new height. In the 2020s, technological advancement and mixed farming turn some countries in Africa, Brazil, parts of Mongolia and Greenland, and some areas of Russia, into major food producers. They are also important sources of scarce metals and minerals — key elements in advanced industrial production. These areas become battlegrounds for natural resources.

Critical reports on global topics can be read in the mass media of some blocs, depending on the bloc's openness and level of freedom of expression. However, the public focuses on the home turf with other blocs receiving little attention. Along the same lines, many media outlets have developed a strong bloc bias. Social media and social networking follow this trend, despite the existence of fringe groups with a global outreach. The polarisation of views leads to the threat of violence between the blocs.

PANDEMICS IN THREE POSSIBLE FUTURES

POSSIBLE PANDEMICS

APPEARANCE OF A NEW ZONOTIC AGENT

GREY PARADISE

Conformity to large-scale industrial farming results in a vulnerability to zoonosis. Although Grey Paradise has an operational surveillance system for pandemics, it could fail in its early stages due to a lack of reporting and rapid follow-up. Eventually, the unwillingness to report among populations that do not want constant surveillance by the authorities leads to significant risk.

REAPPEARANCE OF AN HISTORICAL AGENT

There is especially a risk of sexually transmitted diseases (STDs) emerging as a new pandemic. As their discontentment grows, people in general are reluctant to subject themselves to state monitoring and surveillance, which gives authorities open access to their private information.

MUTATION OF AN EXISTING AGENT

Since access to basic healthcare is almost universal, mutations with new characteristics such as antibiotic resistance become highly likely. Multi-drug resistance may become a particular problem. In Grey Paradise, innovation is more geared towards incremental improvements at the bottom of the pyramid and less towards expensive, revolutionary treatments. Superbugs are a very real threat in Grey Paradise.

HIGHLY TRANSMISSIBLE AGENT (FEW DEATHS BUT MUCH SUFFERING)

Grey Paradise assumes a co-ordinated response, specifically to conventional threats. A surge in demand for healthcare facilities and workers is manageable. However, a disease where the symptoms are not very visible or distinguishable may not get picked up by Grey Paradise's surveillance system.

MOSAINC.

Mosalnc. is characterised by great and complex economic differences. Among the poorer populations, raising different kinds of livestock and crops close to home is a way of providing food. This, combined with poor health conditions, is a recipe for zoonotic pandemics. Furthermore, Mosalnc. relies on extensive food production using agro-industrial innovations on a large scale, with reduced focus on safety measures against microbial contamination.

The problem of a continuous re-emergence of opportunistic agents (e.g., typhoid, diphtheria, cholera, whooping cough, hepatitis and STDs) is plausible, especially in areas with poor living conditions in Mosalnc. In its megacities, infectious agents may resurface and become endemic in poor areas and slums. A largely privatised health sector might lead to increased use of antibiotics and to higher chances of multi-drug resistance. With natural resources becoming very scarce and valuable in Mosalnc., corporations search for metals and minerals in deep waters and underground, in areas previously untouched by humans. Workers could come across hidden sleeping agents that turn out to be sustainable in human habitats.

Production in Mosalnc. tends to be advanced and innovative but less secure, increasing the risk of mutation in existing agents.

Asia and Europe in Mosalnc. may find it especially difficult to deal with a long-term disruptive pandemic, as it would greatly affect markets and the functioning of economies. The absence of governmental or large authoritative bodies may make Asia and Europe unprepared to deal with such a challenge.

GLOCAL BLOCS

In GloCal Blocs, zoonosis is strongly linked to mutated agents because of mixed farming activities in major parts of the world. Also, since blocs do not want to lose their economic and competitive edge, they might fail to communicate the existence of a new agent spreading within animal and human communities.

Although every GloCal Bloc could have its local infectious agents, the risk of global infection is relatively limited due to restrictions on migration. The spread of HIV, tuberculosis, malaria, diphtheria, dengue, etc. could regain momentum, especially in combination with acquired antimicrobial resistance.

There is a risk of mutation, such as in the form of a super flu. This could be a result of a reassortment of the genes that originate from different influenza strains circulating within the mixed “megafarms” of one particular bloc.

Global responses are difficult between the blocs and this may create a problem, especially for the more vulnerable blocs.

POSSIBLE PANDEMICS

UNDERCOVER PANDEMIC CAUSED BY NEW AGENT ('UNDERCOVER' TRANSMISSIBILITY BUT NOT IMMEDIATELY VISIBLE SYMPTOMS, E.G. HIV)

AGENT GENERATED THROUGH GENETIC MODIFICATION

CYBERNETIC PANDEMIC

BEHAVIOURAL PANDEMIC

EXTRA-TERRESTRIAL PANDEMIC

NON-TRANSMISSIBLE PANDEMIC

GREY PARADISE

An undercover pandemic caused by a new agent is not a high risk, due to the existence of a global surveillance system. However, if the new agent is a non-standard agent, there is a chance that it will slip through the system.

A pandemic agent that is generated through genetic modification is a high risk in Grey Paradise. Food is produced on an industrial scale. Animals and plants lack the genetic diversity that would protect them against opportunistic agents. The monitoring and response system can fall prey to malicious intent, sabotage or bio-terrorism. If this kind of pandemic develops in Grey Paradise, it may disrupt food supply for years.

The uniformity of state-controlled networks provides opportunities for external interventions. Computer viruses that remotely affect medical systems are probable and could be caused by a revolt of hackers against government interference. At the same time, in Grey Paradise, specialist bio-electronics used in humans will be less advanced than in other scenarios, thwarting cybernetic attacks of pandemic proportions.

The tightly controlled Grey Paradise is highly susceptible to these underground and largely intangible phenomena. Threat of an increase in depression, euthanasia and suicide in societies worldwide is very real.

While Grey Paradise is generally well prepared, extra-terrestrial infectious agents are likely to be hitherto unknown and can therefore cause significant impact.

The increased life expectancy and general basic welfare of the population in Grey Paradise increases the risk for diseases such as obesity, cancer, depression, Parkinson's and others.

MOSAINC.

The highly mobile world of Mosalnc. fosters contact between people in and between Europe and Asia. Early-warning, prevention and monitoring systems for disease are privately organised and more accessible to the socio-economically prosperous layers of society. An undercover disease could infiltrate and prosper in slums.

The risk of a genetic modification is considerable in Mosalnc. due to more innovative yet less secure R&D and production. The resulting infectious agent could flourish along with new genetically modified organisms (GMOs) or be a GMO itself. Flourishing nanotechnology might also support the pandemic.

Networked medical robots, medical devices and implants are widely used in Mosalnc. All these devices are vulnerable to cybernetic attacks. The great dependence on technology in Mosalnc. places Asia and Europe at risk of cybernetic pandemics. The more advanced devices are affordable only to the more affluent, which entails the possibility of an upper-class pandemic threat in Mosalnc.

With its strongly fragmented societal groups, Mosalnc. is a breeding ground for sects, although it seems less plausible that harmful behavioural memes may develop to pandemic proportions. Hysterical reactions by diverse groups to such news are, however, common in Mosalnc. Even if below pandemic proportions, challenging group behaviour with negative health implications can be a serious risk for Asia and Europe.

Asia and Europe in Mosalnc. are more at risk from an extraterrestrial pandemic as there is no globally integrated early-warning system to warn against this threat. However, the focus on R&D in Mosalnc. may deliver new treatments faster and quicker than in the other scenarios.

Mosalnc. is featured by both diseases and conditions linked to poor living conditions and to increased affluence with nutritional changes.

GLOCAL BLOCS

Possibilities of an undercover agent is fuelled by the economic and strategic interest for not reporting cases. Cover-ups are very plausible in this scenario. This could have devastating consequences, not just in the bloc of origin, but also when other blocs are affected but the agent remains undetected.

In GloCal Blocs, the loss of biodiversity due to GM food production could lead to a much more vulnerable society. The influence of gut flora — both human and animal — on the immune system is not yet fully understood. But changes in this reservoir due to the transition to GM nutrition could have a negative effect on immune systems. Science has already demonstrated a link between human gut flora and the prevalence of obesity. The focus on gene technology in the GloCal Blocs makes this kind of pandemic a significant threat.

The drive for innovation will increase the number of implants in the human population (therapeutic) and livestock (monitoring). This could entail the potential for an epidemic to be spread via information-dissemination, contained by blocs. Preparedness for this kind of pandemic could deprive more traditional threats such as dengue, malaria, etc. of resources.

This seems less relevant in the GloCal Blocs scenario, although the tendency towards secrecy and information wars between blocs may lead to hysteria in some populations.

An extra-terrestrial pandemic is a plausible reality in the GloCal Blocs scenario. There is no globally integrated early-warning system and few means to develop a rapid, global response. Depending on the kind of threat it poses, this kind of pandemic may, however, lead to more global co-operation.

Obesity, diabetes and cardiovascular conditions become serious societal problems in GloCal Blocs across most of Asia and Europe.

EFFECTS OF DISCONTINUITIES

DISCONTINUITIES

COMMUNICATION SYSTEM BREAKDOWN

GREY PARADISE

Grey Paradise's elaborate surveillance and response systems are highly dependent on communication. A breakdown in global communication systems might therefore make it impossible to control a difficult situation. The level of vulnerability to pandemics shoots up in such instances.

NUCLEAR CONFLICT

In Grey Paradise, an inter-state nuclear conflict is not likely. More likely is an increase in nuclear accidents. Health resources would often be busy tackling these threats, leaving the rest of the population vulnerable to pandemics.

MAJOR INHABITABLE SPACE CHANGE DUE TO ENVIRONMENTAL CHANGES (E.G. SEALEVEL RISE)

Grey Paradise allows strong political action. Yet the system would be challenged by the consequences of massive migration, resulting from environmental changes. If the change occurs slowly, then the response systems could be adapted. If the change occurs quickly, inflexible reactions and a false sense of security could open the doors to pandemics.

TECHNOLOGICAL BREAKTHROUGHS

In Grey Paradise, technological breakthroughs, such as the development of a universal vaccine or wonder drugs, look less probable because of the focus on basic health services. On the other hand, the probability of a broadly applicable anti-disease vaccine is high. If such a vaccine or drug became available, it would further enhance life expectancy and may, indeed, lead to a faster destabilisation of Grey Paradise.

MOSAINC.

The breakdown in communication would hit Mosalnc. very hard, especially corporations and the private sector. Communication is key in this highly globalised and differentiated world and its breakdown could bring panic and soaring crime. It would push Mosalnc. towards a large-scale economic crisis.

In Mosalnc., a nuclear conflict seems less plausible on a global scale but more plausible on a restricted, regional scale. It could lead to a massive death toll, radiation illness and decreased food supply. In the short term, the nuclear conflict would lead to mass migration of people to unaffected areas and may increase the tendency for people to focus on the individual or group situation. In the longer run, this drastic event may lead to a complete destabilisation of the system and a resurfacing of governmental or other communal approaches and structures, especially if the nuclear conflict is not resolved.

In Mosalnc. the problems of food supply and security combined with massive immigration would hit poorer areas and poorer populations particularly hard.

Due to large investments in R&D, there is a strong drive towards breakthrough innovations in Mosalnc. While a wonder drug would be of initial benefit mostly for the richer populations, a trickle-down effect in societies makes such technological advances available to all. Pandemic preparedness would greatly benefit from this kind of breakthrough in Mosalnc.

GLOCAL BLOCS

A breakdown in communication systems in GloCal Blocs would strongly affect response systems within the blocs and make them more vulnerable to pandemic threats. In fact, the breakdown may well result, directly or indirectly, from the partially violent tensions between the blocs. The economies in GloCal Blocs are technology-intensive, which adds to their vulnerability. On the other hand, the fact that the blocs are distinct and not necessarily open to each other may make a disease less likely to spread and a communication breakdown may well lead to a halt in the spread of the disease.

In GloCal Blocs, a nuclear conflict is more likely to happen between blocs and is less likely to occur on a global scale. Pandemic preparedness would certainly be affected in the blocs concerned, as it would not be a priority for the health system. In non-affected blocs, the mass suffering caused may trigger solidarity reactions and provide an impetus to a more global approach or lead to even stronger dissension.

Major inhabitable spaces are transferred due to environmental changes. This discontinuity and the migration that follows could blur the lines between GloCal Blocs. It would certainly put lots of pressure on the system. In terms of possible pandemics, it poses a great challenge, as the GloCal Blocs seem unprepared for a cross-bloc or global approach that is needed to cope with these challenges.

In GloCal Blocs, a technological breakthrough such as a universal vaccine risks being caught in the tensions and conflict between blocs. The implementation of intellectual property laws is not a given in other blocs, which increases the risk of conflict. Moreover, poorer blocs or excluded countries may not be able or willing to pay. GloCal Blocs also create barriers to the development of technological breakthroughs as the exchange of scientific findings is tempered by competitive considerations. If breakthroughs appear, they will raise the stakes in GloCal Blocs even further.

APPLICATIONS OF SCENARIOS

The ASEF-ASAP scenarios form the basis for concrete strategy development for pandemic preparedness. Using the scenarios, ASEF has developed strategies for multiple sectors in Asia and Europe.

To date, three strategy development workshops have been organised on:

1. Multi-Sector Preparedness for Pandemics and Public Health Emergencies;
2. Preparedness for Pandemics and Public Health Emergencies in the Passenger Air Transport Sector; and
3. Pandemic Preparedness and Response for Food Supply Security. Based on the outcomes of these workshops, ASEF panels propose three sets of recommendations, which are presented in the tables below.

MULTI-SECTOR PREPAREDNESS FOR PANDEMICS AND PUBLIC HEALTH EMERGENCIES

RECOMMENDATIONS

STANDARDS AND SYSTEMS

Establishing minimum standards for risk assessment and pandemic preparedness plans that are accepted by all stakeholders, by developing early detection and response systems in collaboration with civil society, business, health and non-health actors, governments and international organisations.

PRIVATE-PUBLIC PARTNERSHIP AND PRIVATE SECTOR INVOLVEMENT

Strengthening Public Private Partnerships for Pandemic Preparedness (P5), by creating direct partnerships between businesses and authorities, in order to share plans and best practices, get access to private infrastructure, and support and motivate small and medium-sized enterprises (SMEs) to develop contingency plans.

GREY PARADISE

With global political structures in place, it is possible to create an international generic preparedness plan. However, bureaucratic complexity and the sheer number of stakeholders involved make consultations challenging.

Under authoritarian regimes, the challenge is ensuring the co-operation from the private sector. It is crucial to negotiate their co-operation in order to get access to private infrastructure, such as warehouses and vehicles.

The first column contains a summary of the recommendations that were made by the participants of the respective workshops. The challenges that might come up if we head in the direction of one of the possible three future scenarios are presented in the three columns on the right. To make the recommendations more “future-proof”, additional measures to address these challenges will have to be formulated before these recommendations are implemented.

The three scenarios, strategies, documentation and multimedia applications are accessible via ASEF’s website at: www.asef.org. ASEF calls on all to make use of the scenarios to develop their multi-sector pandemic preparedness.

*“Only with the engagement and active participation of **citizens, NGOs, the private sector and public authorities** across Asia and Europe, can adequate and successful pandemic preparedness become a reality.”*



ACTIONS AND CHALLENGES

MOSAIC.

The private sector is dominant and their primary focus is monetary gain, so it will be challenging to ensure that public concerns are addressed. The focus should be on developing consultation mechanisms with the public sector and civil society organisations.

In order to improve pandemic response, much can be gained if efforts are made to enhance SMEs’ capacity in this area.

GLOCAL BLOCS

Blocs are competing ferociously and the challenge will be to ensure the implementation of an international generic preparedness plan by the regional organisations.

Within the blocs, it is possible to strengthen P5 and enhance access to private infrastructure and SME capacity. The challenge will be dealing with the inter-bloc situation.

RECOMMENDATIONS

EMPOWERMENT AND CIVIL SOCIETY INVOLVEMENT

Engaging civil society, including religious and spiritual leaders, in pandemic preparedness to stimulate support for outreach, behavioural change and psychological support. In addition, civil society organisations can fill the gaps to reach out to vulnerable groups in public health emergencies.

COMMUNICATION AND AWARENESS

Developing effective tools to encourage sharing of information; engaging citizens through social media and crowd-sourcing; engaging traditional mass media as a partner in dealing with public health emergencies; and avoiding both public hysteria as well as negligence.

FOOD SECURITY

Developing and maintaining diversity in diet and enabling proper immune response, flexible adaptation, nutrient variety in food production and emergency food reserves. Ensure a broad eco-system of services to strengthen community resilience.

RESEARCH AND DEVELOPMENT (R&D)

Mobilising more resources to close gaps in R&D by engaging multiple stakeholders to focus on: 1) diseases in the animal-human eco-system interface, climate change induced diseases, new opportunistic agents and new forms of diseases with pandemic potential; and 2) new technologies to isolate pathogens and counter with effective vaccines as well as therapies.

GREY PARADISE

Under normal circumstances, the authoritarian governments allow only limited freedom for civil society. However, in times of crisis, many people turn to civil society organisations for assistance. When a pandemic breaks out, they can play an important role in providing emotional support, help in behavioural change (e.g., vaccination) and raise awareness among vulnerable groups on health care services.

A centralised system for sharing information is feasible under global governance, but it is unlikely that civil society will be involved. If the government is able to gain the trust of the people, it can use social media very effectively. Engaging traditional media can play an important role to counterbalance social media.

The challenge is to brand biodiversity as an important topic, even when food supply is sufficient.

Lack of competition due to centrally conducted R&D might have a negative effect on the diversification of stakeholders. With global political structures in place, R&D on climate change induced diseases is feasible. It is questionable, however, if there will be an incentive to innovate in applied sciences.

ACTIONS AND CHALLENGES

MOSAIC.

People lean toward civil society because they are suspicious of the ineffective governments and public sector. Civil society is important for vulnerable groups in delivering healthcare and social support services. In addition, it can assume a role of checks and balances on the private sector. However, civil society may have a lack of support or funds. Only civil society organisations that represent consumers or provide services in areas with no public distribution will have strong support.

The private sector will have a strong influence in social media. Messages potentially contain a commercial bias, and there is a high risk of manipulation. Media can become a mouthpiece for private companies.

The private sector is leading in this field, but only interested in promoting diversity in food production if this creates economic opportunities. However, consumer demand can trigger the private sector to react.

R&D priorities and implementation will be dominated by corporate interests and stakeholder diversification might be heavily corporate-driven. There is little incentive to deal with marginalised population's concern, e.g., increasing access and affordability of medicines. Lack of intellectual property protection may erode R&D incentives.

GLOCAL BLOCS

Religious groups can play an important role in reducing tensions between blocs.

The effectiveness in sharing information depends highly on the blocs' interests. There is a risk that correct information will not be shared between blocs. Social media could help to counterbalance bloc-biased information in the traditional media. However, this depends on the quality of the information circulation in social media. Readers need to be able to judge competing views.

If food security is made a priority, it will stimulate cross-bloc trade and diverse food production within blocs.

Priority and implementation will be biased by blocs. Bloc division poses a big obstacle when undertaking R&D with multi-stakeholder engagement. Nonetheless, it is possible to co-operate between blocs if there is a common interest. Lacking a global structure, R&D on diseases induced by climate change is difficult. Knowledge-sharing between blocs will be an issue.

RECOMMENDATIONS

INTERREGIONAL CO-OPERATION

Establishing a global forum to create a circle of commitment among multi-sector actors whose responsibilities include: 1) prioritising and co-ordinating actions for effective early warning and response; 2) analysing best practices and addressing future challenges; and 3) developing interactive databases, hands-on tools and e-applications for multiple actors (e.g., the inauguration of an ASEM meeting of Health Ministers)

GREY PARADISE

It is feasible to set up a global forum as a part of the existing political structures.

PANDEMIC PREPAREDNESS AND RESPONSE FOR FOOD SUPPLY SECURITY

RECOMMENDATIONS

LOCAL PREPAREDNESS

- Integrating the pandemic preparedness planning into the broader risk management planning (multi-hazard), including preparedness for response and risk/vulnerability reduction, as well as in the local development planning.
- Identifying one or two agencies that will lead the multi-agency mechanisms that exist at the local level.
- Being aware that below the national level, there is the multi-layered local level, e.g., province, district, community, etc.
- Developing national guidelines on multi-level preparedness planning, and supporting the local institutions at each level to implement guidelines.

GREY PARADISE

Powerful governments will be able to set policies and guidelines on the national level, but specific attention needs to be paid to the local level where the operational plans are implemented.

It is important to make sure that country-specific, multi-hazard contingency plans are in place.

ACTIONS AND CHALLENGES

MOSAINC.

The global forum can be corporate-driven if the private sector thinks that it is profitable; the challenge is in triggering the initiative.

GLOCAL BLOCS

Blocs might see the value of a global forum, but there is a risk of a lack of common strategies. Integration and interoperability remain challenges.

ACTIONS AND CHALLENGES

MOSAINC.

As government structures are relatively weak, it will be necessary to focus on capacity building for communities to be prepared and resilient: Community-Based Disaster Risk Reduction (CBDRR)

GLOCAL BLOCS

As blocs fiercely competing, the preparedness of the healthcare sector at the local level needs to be strengthened and local food production should be stimulated.

RECOMMENDATIONS

POLICY FOR RISK MITIGATION

Setting plans and guidelines for:

- Stockpiling of necessary elements and items, e.g., food
- Transport
- Financial support distribution

Regulating all legal aspects, e.g., the mechanisms to join multi-sector co-operation

EDUCATION

Developing and adopting education measures on risk prevention and response. Ensure that:

- basic preventive measures at the operational level are implemented, at any stage of the food supply chain; and
- there are contingency plans or specific procedures in place, which minimises, and if possible, eliminates the risks of the emergencies that have been identified.

NETWORK/COLLABORATION

Identifying and defining the common goal(s) in order to create an environment of trust between the partners. Identifying potential funding sources from:

- Corporations
- Governments
- Foundations/institutions addressing pandemic preparedness

Mapping the potential "operational partners" (professional bodies and institutions that are going to execute the plans), and identifying the best options for each case.

GREY PARADISE

The government will lead the policy-making process and multi-stakeholders will manage the implementation.

Governments and public authorities play a major role in redistribution of resources and they have strong political power. Their major role should be to build specific public-funded training activities. Public authorities need to gain access to the channels of the private companies to transfer information and advices.

The government is obliged to collaborate. There will be an incentive for the private sector and civil society organisations to continue the collaboration if a "give and take" relationship develops.

ACTIONS AND CHALLENGES

MOSAIC.

The government will lead the policy-making process, but the private sector is in a dominant position. Multi-stakeholders will manage the implementation.

It will be necessary to create an incentive for the private sector to get involved in the education process of operators and society.

There is no strong incentive to start or continue collaborating. Collaboration is geared towards Corporate Social Responsibility (CSR) or Creating Shared Value (CSV).

GLOCAL BLOCS

In some blocs, the government will lead the policy-making process and multi-stakeholders will manage the implementation.

Blocs are fiercely competing among one another, so in order to stimulate the sharing of experiences and practices, supra-national organisations need to be involved.

Collaboration is a top-down process by the government/authorities and actively formed and implemented by groups of experts across blocs.

RECOMMENDATIONS

RISK COMMUNICATIONS STRATEGIES

Focusing on two overarching goals of risk communications in the context of pandemics and food security:

- Ensuring business continuity; protecting food chain operators from pandemics so as to maintain food security during an outbreak
- Avoiding misperceptions about the risks of food and the transmission of infectious materials, which can lead to an artificial unnecessary shortage or a waste of food.

Establishing a joint public private pandemic platform to develop and deploy joint messages.

Developing joint social media platforms as a key mechanism to increase the dissemination of messages.

SHARING INFORMATION

Sharing information on pandemic outbreaks through a monitoring system. At the national level, there are specific monitoring systems on the ground; at the regional and international levels, sharing is based on monthly reports through specific websites for declaration. Taking into account the existence of informal channels of information sharing.

INVOLVING PRIVATE SECTOR IN PUBLIC POLICY DECISION-MAKING

Creating a joint planning process with stakeholders from both the private and public sectors. Stakeholder consultation will be engaged at all stages of planning. Additionally, international organisations could be involved.

GREY PARADISE

Government/public authorities will lead risk communications. Public authorities should seek collaboration with actors who are critical of the government in the social media.

Receiving feedback from the different levels of administration would result in dysfunction in the sharing of information.

Joint planning and consultation will be difficult as it is largely a top-down approach. The public sector should increase safeguards or criteria to ensure a fair approach to involve the private sector in the decision and policy-making process.

ACTIONS AND CHALLENGES

MOSAIC.

Risk communication strategies are set by the private sector's profit-oriented agenda; even the content of the message is designed to protect and enhance the maximisation of profits.

Reporting will be done through corporate conglomerates. Surveillance systems are set up by the private sector to serve their own interests. Information will not be shared but sold.

The private sector will dominate the decision-making process, but the public sector is still needed for several issues, e.g., redistribution of welfare, providing health care, etc.

GLOCAL BLOCS

The focus will be on a regional approach on risk communication strategy. Differences in development within regions should be taken into account.

Sharing of information would be based on strategic interests, in the context of partnerships with other blocs. Local surveillance systems would be developed through partnerships between blocs.

Public policy committees, in which the private sector is involved, will be chaired by governments according to assignment or based on expertise.

RECOMMENDATIONS

CO-OPERATION BETWEEN BLOCS AND COUNTRIES

Implementing agreements on the ground by establishing working groups with clearly identified roles and responsibilities, which are composed of multinational companies, governments, international organisations and others.

Consider the following steps:

- Assess a country's needs in order to identify which resources can be shared with other countries, and develop action plans accordingly
- Allocate human and financial resources (including education and training) in order to implement the action plans
- Include a monitoring and evaluation component (e.g., ASEAN focal point; Committee of Food Security)

GREY PARADISE

Governments will take the lead in establishing working groups and setting the agenda to implement agreements.

ACTIONS AND CHALLENGES

MOSAINC.

Multinational companies will play a major role in implementing agreements on the ground, but government needs to be involved to co-ordinate the efforts.

GLOCAL BLOCS

The role of social media is very important in countries with limited freedom of expression, where media outlets focus on the home turf, rather than on co-operation between blocs and countries.

PREPAREDNESS FOR PANDEMICS AND PUBLIC HEALTH EMERGENCIES IN THE PASSENGER AIR TRANSPORT SECTOR

RECOMMENDATIONS

CO-OPERATION AND CO-ORDINATION

Multiple stakeholders — organisations and individuals including representatives from state authorities, civil aviation authorities, public health organisations, the airline industry, air traffic management, airports, etc. — should undertake a continuous effort to build and use their own networks and do respective stakeholder mapping. This network should be used to exchange information and expertise. The networking is based on trust and strong relationships, both personal and professional.

PLANNING

Ensuring continuity in business, supplies, human resources, healthcare systems and all other aspects of society, both during and after crises. This includes testing, reviewing (cross-checking), re-planning and training, by organising periodic tabletop exercises.

STANDARDS AND REGULATIONS / CERTIFICATION

Cross-checking, co-ordinating, and certifying standards and regulations of companies and other official entities, both internal and external. Standardising passenger safety during pandemics through aircraft disinfection and decontamination. Harmonising rules in different countries, airports and airlines.

GREY PARADISE

It is likely that the government will arrange these partnerships and that it will undertake efforts to consolidate structures in order to prevent tax losses.

The central government will lead planning through a committee. Countries with different views have no alternative but to follow the plans of this committee.

A centralised international government structure makes it more feasible to implement WHO's International Health Regulations (IHR) 2005.

ACTIONS AND CHALLENGES

MOSAIC.

With the private sector in the lead, there will be a higher threshold for co-operation and the approach will be reactive rather than proactive. The airline and the pharmaceutical industry will be the main drivers of co-operation.

Planning is done by the private sector, which has the expertise. These plans will focus on minimising costs and ensuring safety and business continuity. The private sector provides competitive services. As a counter-development to the increasingly profit-driven and individualist society, many people turn to NGOs that provide protection and specific services. The more powerful NGOs can exert some influence over the planning, such as that of healthcare systems.

Certification is increasingly the prerogative of private agencies. There is a risk that commercial interests may thwart public interest.

GLOCAL BLOCS

The fierce competition between blocs will make co-operation very difficult. Another challenge will be to identify who the representatives of blocs will be. There will be some co-operation at the regional level.

Strong co-operation between blocs will be necessary.

The plans will address specific bloc problems, e.g., high-risk areas and migrants.

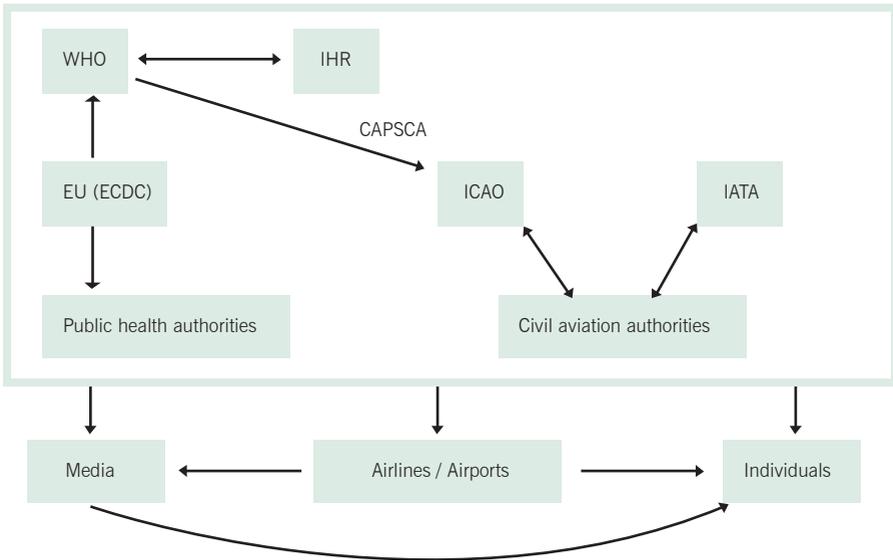
There is a risk that the high tensions between blocs will result in a cessation of negotiations on international standards.

COMMUNICATION

Tasks for the World Health Organization (WHO), the European Centre for Disease Prevention and Control (ECDC), public health authorities and civil aviation authorities, crisis management teams of airports and airlines, and individuals (e.g., via social media):

- Before a public health emergency:
 - Prepare website
 - Prepare crisis templates
 - Send a notification from public health authorities to WHO in case of suspicion
- During a public health emergency:
 - Communicate plan for media
 - Start a website
 - Communicate templates
 - Create hash tags and/or Facebook page for social media
- Communicating through: website, social media, reports, TV and radio

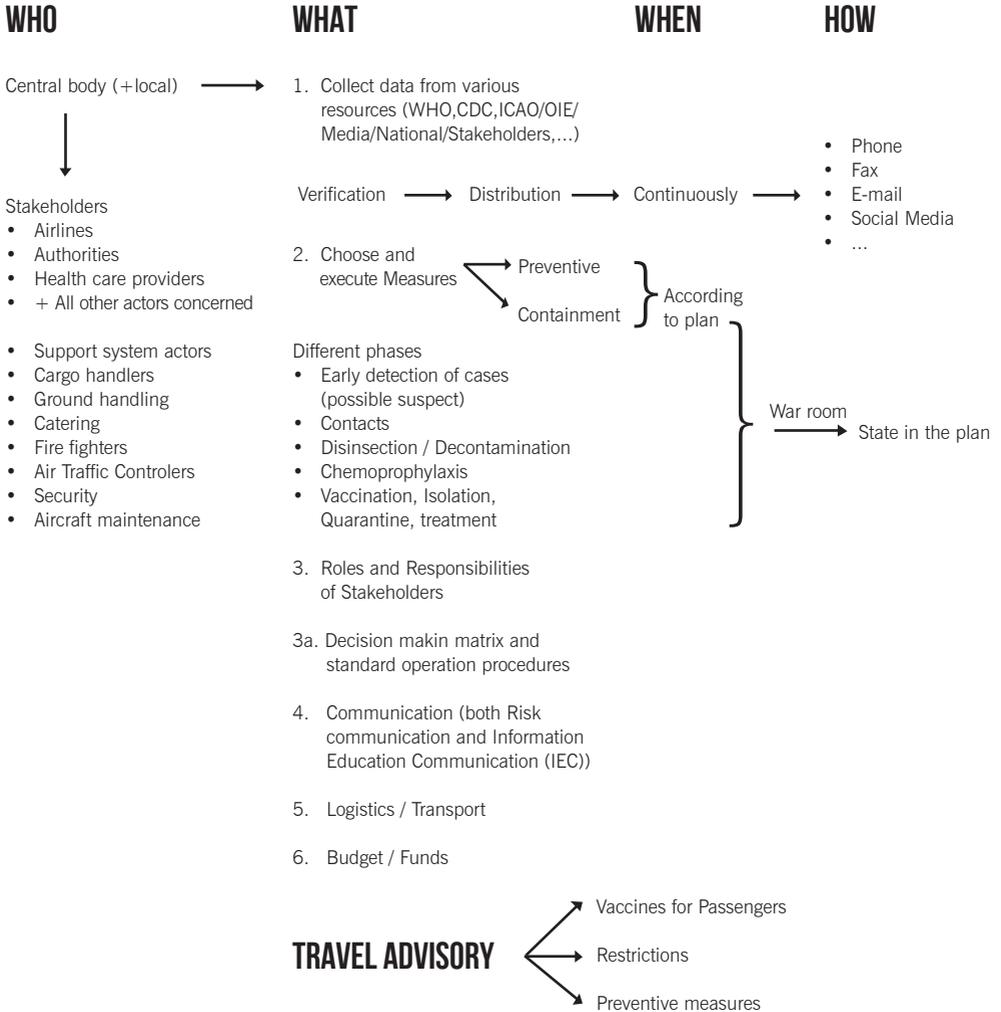
Representatives of the passenger air transport sector, i.e., civil aviation authorities, airlines, airports, need to be in regular contact with the media to provide them with correct information. It is crucial to ensure that the media output is reliable to counterbalance messages with a possible commercial bias. At the same time, these representatives need to be aware that some people place more trust in bloggers and social media than in official sources. Scientific information should be interpreted by qualified people who are able to translate the different types of messages to different audiences.



- WHO : World Health Organization
- IHR : International Health Regulations
- ECDC : European Centre for Disease Prevention and Control
- CAPSCA : Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation
- ICAO : International Civil Aviation Organization
- IATA : International Air Transport Association

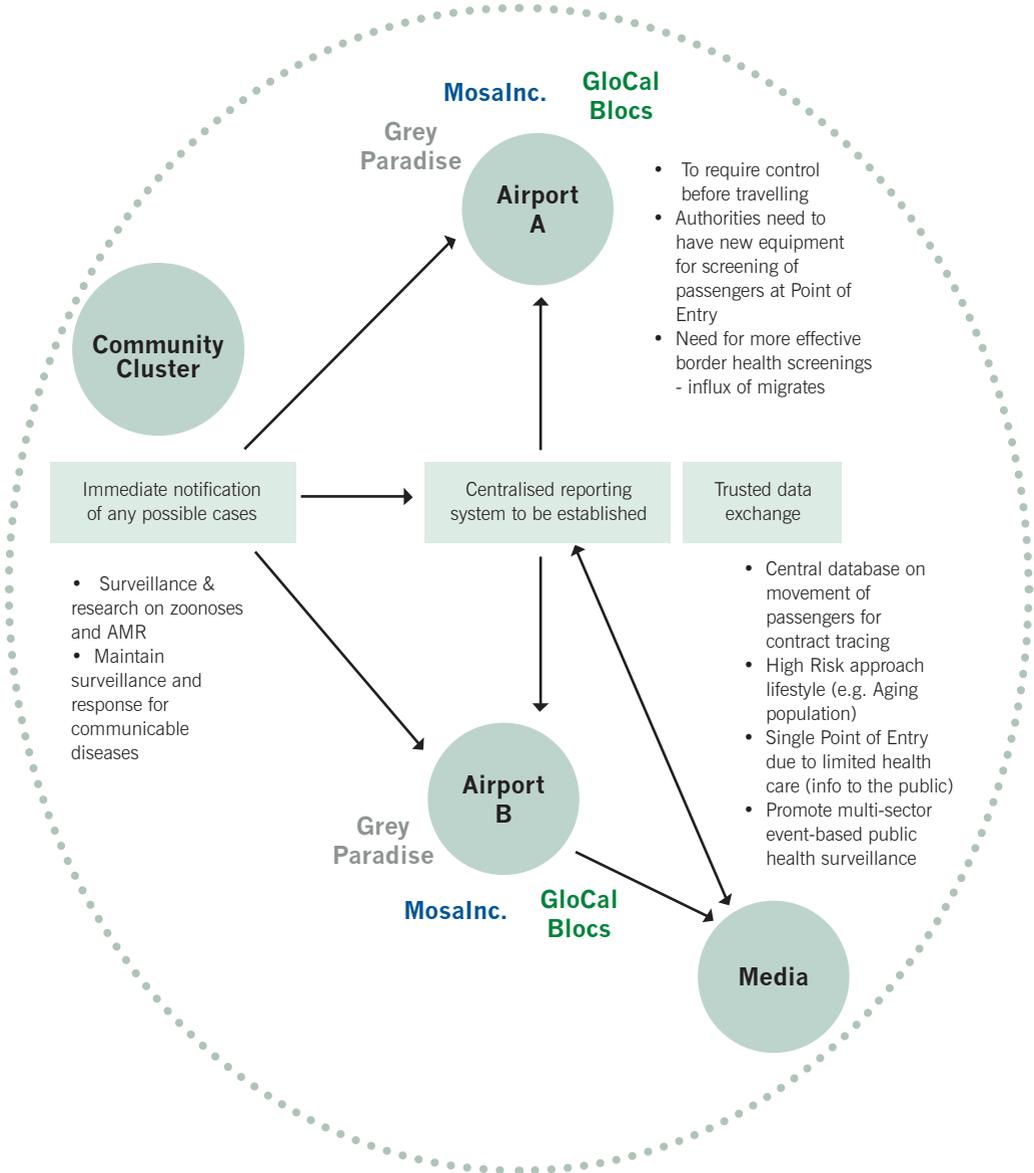
SURVEILLANCE AND RESPONSE MECHANISMS

Establishing an independent agency, accepted by all stakeholders (comparable with a rating agency such as S&P), that rates private sector organisations (e.g., airports) on how well they report and respond. The agency should be based on a public-private partnership, covering all regions, represented by all actors, and funded by different stakeholders (i.e., self-sustained).



SURVEILLANCE AND RESPONSE MECHANISMS

Possible detection should be reported by the community (i.e., hospitals, clinics, doctors) directly to the airports through a centralised reporting system or agency. This system transmits the report to the airports again as a safeguard in case the first report from the community is neglected, and functions as a central trusted data exchange facility.



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ASIA-EUROPE FOUNDATION (ASEF)

The **Asia-Europe Foundation (ASEF)** furthers understanding, fosters relationships and facilitates cooperation among the people and institutions of Asia and Europe.

ASEF enhances dialogue, enables exchanges and encourages collaboration across the fields of governance, economy, sustainable development, public health, culture, and education. Founded in 1997, ASEF is a not-for-profit, intergovernmental organisation located in Singapore. It is the only permanently established institution of the Asia-Europe Meeting (ASEM)*.

Together with about 700 partner organisations ASEF has run more than 600 projects, mainly conferences, seminars and workshops. Over 17,000 Asians and Europeans have participated in its activities and it has reached wider audiences through networks and web-portals, exhibitions and lectures.

For more information, please visit www.asef.org

*The 51 ASEM Members are Australia, Austria, Bangladesh, Belgium, Brunei Darussalam, Bulgaria, Cambodia, China, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, India, Indonesia, Ireland, Italy, Japan, Korea, Laos, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mongolia, Myanmar, the Netherlands, New Zealand, Norway, Pakistan, the Philippines, Poland, Portugal, Romania, Russia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, United Kingdom, Vietnam, the European Union and the ASEAN Secretariat.

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* The resource persons' designations, organisations and countries of residence are based on the information available at the time of the scenario-building workshops throughout 2010.

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