

## CHAPTER 4. OUTLOOK 2002 TO 2032: THREE "ALTERNATIVE FUTURES" FOR THE CAUCASUS REGION

Due to both its ancient past and more recent history, as well as its strategic but vulnerable geographic location, the Caucasus region is often considered one of the least predictable and unstable regions of the world. In today's world, one can well imagine it quite easily embracing Western values and moving towards European integration or, at the other extreme, ending up resembling a country such as Afghanistan, ethnically divided and set back in time. In addition, the Caucasus can only be considered a single entity from the geographical perspective, while developmentally speaking, it is more clearly divided into at least two parts: the North (Russian) Caucasus and the South Caucasus, each of which are further subdivided in turn. The Russian Caucasus includes two distinctive parts: the Russian regions proper (roughly, the western part) and non-Russian autonomies. Although formally quite similar as members of the Russian Federation, they differ both in their current status and trends of development. The South Caucasus, of course, is composed of three separate and independent states, each different in their history, ethnic composition and politics.

The third Global Environment Outlook (GEO-3) report recently published includes a description of four outlooks for the future at the global and broad (e.g. the pan-European) regional levels. These four scenarios have been given the designations of "Markets First", "Policy First", "Security First" and "Sustainability First". While it was not deemed either logical or possible to re-create all four of these scenarios for the Caucasus, due to factors explained below, three have been used as inspiration for potential futures of development and environmental impacts in the Caucasus in the following pages. Respectively, these are the "Status quo" (roughly analogous to "Policy First" in GEO-3), "Market world" (similar to "Markets First" in GEO-3) and "Downfall" (which can be linked to "Security First" in GEO-3). While there are broad parallels between the global scenarios in GEO-3 and those that have been developed for this report, it is emphasized that the global scenarios served only as background and points of

departure. In addition, the process of developing the three Caucasus scenarios was far more limited in time and scope than the one employed for the global scenarios.

The general trends, scope and characteristics of environmental changes during the scenario period (2002 - 2032) are determined by two sets of factors that affect the region in its entirety:

- The degree of capability to adopt and implement market reforms as the only realistic development alternative by all regional political entities; and
- The degree of capability to alleviate numerous regional conflicts, to a level such that they will not impede progress and development in the Caucasus.

There are of course additional factors that may strongly alter developmental trends at the regional level, but the two factors mentioned above are the most important ones.

The scenarios presented here were developed as a result of intensive consultations between the lead author for their development and representatives of various international bodies, NGOs, and research and academic institutions in Armenia, Georgia and Russia. The assistance of the late Gunter Beuchel from the Delegation of European Commission in Georgia; Ghia Nodia of the Caucasus Institute for Peace, Democracy and Development; Yuri Mazourov from the Russian Academy of Sciences; Galina Gladkevich from Moscow State University and Hrant Sargysyan from Armenia, as well as David Kikodze from "Dzelkva" environmental centre was especially valuable.

While reviewing these scenarios, it is vital to understand that despite a natural tendency to use them as forecasting tools, one cannot do so. They are not intended to provide quantitative information based on analysis of actual processes or phenomena. Rather, these scenarios suggest how, based on the collective knowledge of numerous experts, one may envision the future of the Caucasus region. Departing from the trends of development that are the most obvious today, the CEO scenarios team has attempted to construe various trajectories, which the region may plausibly follow and which would lead to very different future worlds.

This is virtually the first attempt to bring together critical trends and information on the social, economic, political and environmental contexts to create broad long-term outlooks on the future of the Caucasus. Some of the trends which are traced are positive, some are negative, but in general obstacles along the path of regional transformation are such that relative tranquillity and sluggish development, combined with peaceful dissatisfaction may emerge as the most preferable trend. Although the scenarios have been put in the order of preference, in a region so volatile as the Caucasus, this order could easily be disrupted.

Generally speaking, the prospects of development for the Caucasus region are such that the fourth GEO-3 scenario *Sustainability First* was simply not considered applicable<sup>31</sup>. Instead, *Market World* has been used as an example of radical changes of policies and social transformations. There is thus the assumption that real market transformations of the type Eastern European candidates for EU membership are currently undergoing are the most radical, improbable and perhaps desirable that could take place in the Caucasus region. In place of the *Market World* scenario, the baseline scenario developed is called *Status Quo* and makes the assumption the current balance of power and relative stability in the region will last throughout the period until at least 2030.

A *Status Quo* scenario sees general peace and tranquility in the region. Regional conflicts in the South Caucasus are settled in a way that fully satisfies no parties involved, but still promotes relative stability, observation of human rights and the rule of law, resettlement of most refugees, and the opening of now isolated regions to the outside world and their integration into the regional economy. This also promotes border security and a relative reduction of smuggling, especially arms trade and trafficking. Improved internal stability also encourages greater access to world markets.

All regional players persist with economic reform policies they formally began a decade ago, but the actual pace of economic development is slow, even sluggish. It takes a long time until the region as a whole reaches even the pre-1990s level of economic development. Actually, the Caucasus continues to suffer through one low-intensity economic crisis after another, interspersed by short periods of intensive growth. Technological and business innovations spread, but are mainly restricted to major urban centres and development poles. The level of integration in the world economy remains relatively low, and is mainly represented by commercial transit traffic, fuel and some agricultural commodities' exports.

31 Allen Hammond in his Which World? Scenarios for 21st Century also omits this scenario while talking about Russia. He says - "I omit Transformed World scenario because even a Market World depends on a successful political and economic transition that is, in effect, a profound transformation of Russian society" (p.218).

Out-migration so characteristic in major parts of the region throughout the last decade of the 20th century drops to a negligible level in Georgia and Armenia, as these countries simply exhaust their population export potential. On the other hand, rural-urban migration intensifies, with smaller towns losing their population to the capitals and local development poles. Inequality in population distribution thus increases. On the other hand, the Russian autonomies and Azerbaijan, with relatively high levels of natural growth, will continue to supply large numbers of migrants to main Russian urban centres, especially Moscow. Such population movements occasionally lead to strained relations as a result of ethnic hostilities. In Dagestan, in addition to already observed out-migration of population from regions adjacent to Chechnya, a new flow of migrants emerges due to lands being affected by the rising level of the Caspian Sea, with a similar situation observed in Azerbaijan.

The level of the regional economic integration increases, albeit slowly. Towards the second part of the scenario period, this may lead to the formalisation of such relationships, although not yet at the level of creating some type of regional economic union.

Environmental problems will remain rather low on the scale of priorities, both for governments of the region as well as for the population, although constantly mentioned by those in positions of authority. All countries of the region will formally subscribe to most major international conventions, adopt environmental laws and create appropriate institutions, but will hardly ever apply them. Those environmental measures that are taken will be relatively inefficient, and no radical changes in current environmental policies will take place.

The main reason will be an elementary shortage of resources (more evident in the South Caucasus than in Russia), corruption and a widespread absence of environmental awareness. As currently, environmental problems will mainly be dealt with if they lead to some kind of disaster, or if an outside government or international body is interested in its solution and finances the appropriate operations.

The most evident development for the South Caucasus will be emergence of a transportation

corridor serving as the main outlet towards the world market for the Central Asian countries. Besides increasing incomes and boosting the relevant economic sectors in Azerbaijan and Georgia, this strongly adds to the growing volume of air pollution and noise, as well as the loss of valuable agriculture land for road and rail construction. Waste dumping along these routes (especially from numerous small food and other retail service outlets) emerges as an additional problem.

Georgia will be the country most seriously affected, since the main generally east-west transportation corridor will be supplemented here by reconstructed north-south highways, allowing year-round transit between Russia and Georgian Black Sea ports. Only far into the second half of the scenario period will some efficient measures to ameliorate this situation be implemented.

Port development will also cause plenty of concern, especially at Novorossiisk and Anapa in Russia. Especially in the former case, a large-scale development along the very narrow coastal zone side-by-side with the only Russian sea resort area will lead to numerous environmental problems, mostly in the form of sea water pollution, coastal erosion, land degradation etc.

Coastal zone problems will strongly affect both the east and west shorelines of the region, especially in the absence of efficiently-applied legislation regarding coastal zone protection and managerial practices, as well as a lack of coordination among different states of the region. Rising Caspian Sea levels, as well as growing petroleum and gas exploitation, will only add to the general degradation.

Besides being affected by the main transportation corridors, air pollution will also increase throughout the leading urban centres of the region, mainly because the demand for cars will definitely outpace the reconstruction of transport infrastructure, enforcement of road regulations and better traffic planning.

The quality of the urban environment will also degrade during most of the scenario period, due to deteriorating infrastructure of (especially) housing, a lack of financial and material resources for their maintenance and inefficiency of local community services.

Degradation will be more pronounced in parts of the South Caucasus where construction began earlier; Russian urban centres will be affected later in the period. Often this will leave the local population more exposed to earthquakes through weakened construction, poor roads and other infrastructure. Some improvement in the situation will be noticeable only by the end of the period.

The problem of access to safe drinking water sources, rather than a wider problem of water pollution, will gradually emerge throughout the region, as water supply and wastewater treatment systems (where they exist) will deteriorate more rapidly than they can be replaced. This will lead to outbreaks of dangerous infectious diseases, especially in the eastern part of the region.

In general, the region will be characterized by a gradually diminishing role for industry as a major factor affecting environmental quality. Instead, industry will be supplanted by such sectors as agriculture, forestry and transport. At the same time, inherited industrial waste and pollution will not be cleaned up and thus remains a latent danger throughout the region. The mining industry will largely retain potential for growth, but this process will develop slowly and take a long time until pollution in the industry reaches pre-1990 levels, even assuming environmental protection measures are largely neglected.

Negative consequences of deforestation processes in Georgia and Armenia that emerged in the early 1990s as a reaction to the energy crisis will be felt throughout the scenario period. Although the overall area logged is very small compared to the region as a whole, it affects the most environmentally sensitive areas. Especially in parts of the Western Georgian mountains, this will cause a situation when tens of thousands of people will live virtually on top of environmental hazards, where excessive rain or snowfall may cause massive life-threatening landslides, mudflows and other dangerous processes.

In Armenia and Eastern Georgia, the same logging will add to already widespread desertification processes, leading to abandonment of valuable agricultural lands. It will also cause a deficit of drinking water, especially in rural

areas. Many natural tourism sites will be strongly devalued throughout the region as well.

Although illegal and unsustainable logging in the region will finally be reduced, selected logging of valuable tree species will continue throughout the western part of the Caucasus, where it is easier to export them from the region. Biodiversity degradation in affected areas will be noticeable. The rural population will also continue using forests as fuelwood sources throughout the scenario period, due to relatively high energy prices and widespread poverty. Overgrazing will also cause problems, especially in the transition areas between forests and the alpine zone. Reforestation will be inadequate or totally absent.

Agricultural land use will continue to shrink throughout the region, more as a spontaneous reaction to changing economic and environmental conditions, rather than as a result of planned reforms. In many cases, this will lead to restoration of pre-agricultural landscapes, but also in some cases, the creation of vast wasteland areas. In large areas of the western part of the Russian Caucasus, this will emerge as an environmental crisis, due to water-intensive agricultural practices and over-exploitation.

In Western Georgia, thousands of hectares of former tea plantations will become fertile ground for numerous imported weeds, and be transformed into "aggressive" landscapes incompatible with the indigenous local plant and animal species.

Agricultural land use will also shrink throughout the Eastern Caucasus as a result of continuous desertification processes, degradation of irrigation systems and outdated agricultural practices. This will routinely be accompanied by salinization of soils.

In Dagestan, on the other hand, growing transformation of land for agricultural use will emerge under the pressure of population and a persistent patriarchal model of management. Growing deforestation and erosion, especially on mountain slopes, will accompany this process.

The disorganization of previously existing agricultural consulting services and poor quality control of farm products will lead to emergence

of an additional hazard, especially evident in the relatively smaller farmsteads of the South Caucasus and Russian autonomies. Farmers will use the cheapest available pesticides and herbicides as well as other chemicals, often of dubious origin, untested or even prohibited for use in more developed countries. The low general level of "agricultural literacy" will only exacerbate the situation through improper application of these chemicals. Numerous cases of poisoning and general health scares will accompany this process, while measures undertaken by local authorities will be inefficient and often applied only "after the fact".

It will take a number of serious crises and at least until the middle of the scenario period until a new type of agricultural economy, based on technology and modern managerial practices will emerge. This process will take especially long in the steppe regions of the western part of the Russian Caucasus, where the residual collectivist agricultural land management and ownership traditions are deeply ingrained in local farming traditions.

Throughout the region, conflicts between pressing subsistence needs of the local population, and the necessity to establish and maintain protected areas will be evident. In some cases, this will lead to revision in the status of such areas, or abandonment of plans to establish new ones. Remaining natural habitats, especially along the Georgian part of the Black Sea coast will come under growing pressure from development projects, and attempts to protect them will not be always successful, especially during the first half of the scenario period.

Under the "status quo" scenario, tourism will not play a significant role in regional development, with the exception of the Black Sea coast where growing demands for holiday and leisure visits at sea resorts will lead to redevelopment of the Abkhazian coastal zone, as well as the southern slopes of the Caucasus range. This will only occur towards the end of the first decade of this century, by which time local landscapes will be properly "rested" and less vulnerable to human impacts. Land management and development practices will also be noticeably improved as compared to earlier.

Local geological processes will intensify throughout the region, especially in mountain-



ous areas. Many parts of Armenia and Georgia will be endangered by land and mudslides, which will also be life threatening in some regions of Azerbaijan, parts of the central and eastern North Caucasus, and especially on the southern slopes of the North Caucasus at the Black Sea coast. These processes will routinely cause infrastructural damage and heavy material losses, and occasionally lead to evacuation of local populations and loss of life.

The *Downfall* scenario displays a world of chaos and degeneration arriving in the Caucasus. Under this scheme, governance in general and law-and-order in particular in the region deteriorate, due to a number of both external and internal forces (economic stagnation, population movements, weakness of central authorities etc.). In addition, global factors as played out in the region (notably, the anti-terrorist movement) have the impact of de-legitimising current governments and putting greater emphasis on reinforcing national military sectors, rather than fledgling market economies and relatively weak central governments. The states' armed forces instead become alternative centres of power and the predominant recipients of external funding from Western and other governments.

Under the pressures of externally de-stabilising forces and internal pressures, the relatively weak governmental structures of the South Caucasus countries - Armenia, Azerbaijan and Georgia - all but completely break down. Their economies grind to a halt, daily commerce and utilities cease to function and the general level of life falls to a near-unbearable level. People from all three countries begin departing again, some returning to the countryside to survive from the land, some standing in line in front of foreign embassies seeking permission to migrate abroad.

Real law-and-order ceases to exist, with armed criminal gangs roaming the countryside. In the end, governments are back where they were in the beginning of the 1990s, controlling only the capital cities, and even those rather tenuously. Strong support from abroad proves incapable of stemming the overall decline, and foreign powers eventually abandon their attempts to use the South Caucasus countries as a base for fighting "international terrorism".

Gradually, the region as a whole turns into an international pariah, neglected by international donors and constantly under threat of sanctions for allegedly "supporting" terrorism. After some years the situation eventually settles down, but at a much lower economic level than the early 2000s. With the entire region impoverished, economies in shreds and services mostly non-functioning, there is little hope of a better life to offer long-suffering populations, leave alone to lure back foreign investors et al. to help rebuild the region.

Huge foreign funds invested in the oil and gas industry are not long able to act as a serious braking factor to the armed redistribution of power, and investors leave en masse. Eventually, local clans take over but inherit countries in ruins and with serious opposition presented by Islamic fundamentalists, who have in the meantime become popular during years of unrest and instability.

Under circumstances such as these with a majority of the population struggling merely for survival, there is no place for environmental priorities. Environmental problems either "solve themselves" in what can be seen as natural or spontaneous ways, or are largely ignored and/or become aggravated.

Two opposing trends can mainly be observed. On the one hand, disruption of agriculture and massive outflow of population leaves large areas of lands unattended. These turn back into natural landscapes, a process that in mountainous areas with sufficient precipitation, as well as in parts of the western Georgian lowlands, is beneficial for nature. Natural habitats are restored and animal species abound. Formerly irrigated territories throughout the region turn into salinated steppes or semi-desert badlands, unfit for exploitation without huge investments.

On the other hand, territories under cultivation are over-exploited by the population which cannot provide necessary inputs in the form of fertilizers, machines, seeds etc., and relies heavily on manual labour and traditional methods of land cultivation. Land plots are often used for cultivation of drugs.

Forests within easy reach of the population are subject to intensive felling and various uses, since often they are the only source of fuel, food and general income for the locals.

Geological processes (erosion, landslides, mudslides) within populated territories are intensified: aside from damage done by logging and soil erosion, neither the state nor private sector possesses enough resources to control these processes as before. Threats of natural processes to people, communications, roads and other infrastructure thus continue to increase.

Lack of drinking water becomes a problem throughout much of the region, often leading to abandonment of settlements and occasional conflicts over access of safe water sources. Various diseases caused by poor water quality abound and worse, repeated droughts lead to impoverishment of much of the rural population and isolated cases of famine. Epidemics of infectious diseases such as cholera and dysentery break out and spread since, given current conditions (deterioration and further disruption of health care systems), they are not efficiently fought, and foreign aid for this purpose is both insufficient and arrives too late.

During periods of unrest, numerous oil and gas pipelines criss-crossing the region become prime objects of terrorist attacks, with catastrophic consequences for both the local population and natural habitats. Petroleum pipelines are routinely drilled in order to get raw oil for household and personal use, and thus spillages abound which turn hundreds of square kilometres into polluted wastelands.

Disposal and treatment of wastes become a serious problem, since removal services are close to failure, even in leading urban centres, and non-existent elsewhere. There is little or no waste-water treatment, and sewage systems in cities are badly maintained and leaking, which often leads to pollution of drinking water, damage to buildings' foundations etc. On the other hand, the massive reduction in industrial output has the effect of reducing levels of water pollution to a minimum.

Protected areas in close proximity to human population become virtually extinct, remaining only in a rudimentary form. On the other hand, coastal areas are in much better shape than before, because with little or no tourism and few other activities, they often revert to relatively pristine conditions.

In short, the "Downfall Scenario" brings economic and social ruin to a region which has

known more than its fair share of these plagues during the late 20th century, and in general as well an over-whelming neglect of environmental issues, due to disease, general disorder and poverty. The only instances where improvements in the state of environment may be noted are paradoxically through remediation by non-management or depopulation of certain zones, as opposed to active government policies to bring about change for the better. Pure physical survival becomes the watchword for all but the smallest (most well-off) fragment of the population, and certainly any concerted attempt to address environmental problems as a collective effort in the region will take years or even decades.

***A Caucasus Market World.*** By 2010, the entire Caucasus region has undergone a series of democratic transformations and become increasingly stable, setting the scene for sustained growth and even movement towards the development of a regional economy and the related underpinning institutions. The Russian Federation, for example, has not only become a full member of NATO, but is gradually approaching membership in the European Union, with the states of the South Caucasus perhaps not far behind.

Long-existing regional conflicts/disputes are mostly solved through successful political dialog and the participation of European structures, securing transition to a new order of relationships in this region, and engaging all players in mainstream democratic reforms and market transformations.

For example, total restructuring of the agricultural sector, including a shift to individual land ownership, takes place and a new, fiercely competitive agricultural sector emerges. It is upheld by the strong development of storage and processing facilities, and farmers cease fearing high yields of grain crops such as corn and wheat. Growing pan-European economic integration turns this region into a main supplier of European markets, gradually leading to the abandonment of outdated pesticide-and water-intensive practices.

All countries of the region actively participate in concerted efforts to fight cross-boundary crimes and terrorism, although it is well into the second decade of the 21st century until these measures bring real results.

In the South Caucasus, governments are increasingly devoted to market reform and democratic transformations. They manage to curb the appetites of corrupt bureaucracies and open the way to development of the private sector, especially beneficial for the emerging middle class, securing in the process the presence of foreign investors in the country. With constructive American and Russian cooperation, as well as the participation of international structures, the countries eventually manage to solve the existing territorial problems through international mediation. Although some general mistrust and resentment remain, the countries begin various forms of economic cooperation and participate in joint regional efforts.

The regional economy expands vigorously, technological and business innovations spread rapidly and foreign capital flows in. As investments and the general business atmosphere become more secure, former emigrants from the region begin to return, bringing with them capital amassed elsewhere and further spurring the economy. Since all these countries aspire to EU membership, they work hard to harmonize their laws and managerial mechanisms with existing European ones, which in turn leads to ever-growing regional cooperation and establishment of a number of joint structures.

Rapid economic growth leads to increasing pressure on the natural environment throughout the region, which gradually leads to pollution levels comparable to, if not exceeding, pre-1990s ones. Initially, this growth will be concentrated in sectors that can be developed without serious managerial and policy innovations. It is mainly concentrated in already existing or planned industries and infrastructure, often revitalizing old Soviet enterprises, and includes development of the most easily extractable mineral deposits, even if they are not economically viable in the end and are thus soon abandoned.

Transport in general and industry (especially mining) are the main sectors exploited in this game. Development of new unclean industries along the main petroleum and gas pipelines criss-crossing the region only adds to growing pollution. In cities, transport and housing development outpace infrastructural development, leading to rapid growth of air pollution, shortages of drinking water, waste-water runoff, numerous local land-and mudslides and removal of plant cover.

It takes nearly two decades before such negative processes are finally curbed and in some instances reversed. Only far into the last decade of the scenario period, with growing integration in the international economy and accelerating globalization trends, is sufficient pressure exerted on local governments for them to adopt comprehensive environmental policies which have mitigating effects on transport, industry and urban infrastructural development.

Everywhere throughout the region, demands in new energy (both local and imported) for the expanding economy clearly outpace the introduction of new, energy-efficient technologies. Although alternative energy production based on local clean energy sources such as thermal water, wind and solar power will be widely utilized, overall greenhouse gas emissions in the region will grow and eventually cause concern in regard to meeting Kyoto Protocol targets.

Deforestation processes will be the easiest to curb, through more efficient application of already existing laws and regulations and tighter border controls, but this will only take place by the second decade of the century. Some early attempts to introduce forest plantations will be made. Negative impacts of this logging in the forms of desertification, local geological processes and water deficits will be felt throughout a major part of the region well after the end of the scenario period. The danger to the population in the most adversely affected areas will remain high.

Agriculture will go through a series of transformations until at last more sustainable agricultural practices emerge. This will not happen universally throughout the region. Old patriarchal practices will still prevail in the eastern part of the North Caucasus and parts of Azerbaijan with rapid population growth, leading to increasing pressure on the land with the anticipated consequences.

In Armenia, Georgia and part of Azerbaijan, agricultural restructuring will lead to the emergence of a modern sustainable sector based on producing ecologically grown fruit and vegetables for the pan-European market. This will be followed by abandonment of many inefficient sites, which will revert to more "natural" ecosystems. Much land area in the Eastern Caucasus will be abandoned due to desertification, erosion and salinization.

Inherited pollution and degradation will not be properly cleared and additional pollution will occur during the scenario period, due to the existence of more pressing priorities than environmental ones, mainly in the realms of economic development and fighting poverty.

On the other hand, in developing some highly profitable sectors of the economy, environmental considerations will be of paramount importance. Appropriate policies and laws will be developed, coordinated and vigorously pursued by all states of the region. Tourism will play an increasingly important role for regional development (especially in the Western Caucasus) as infrastructure develops, the rule of law is extended and the security of visitors is guaranteed.

Ecological tourism will become widespread in the Western Caucasus, which in turn will lead to the growing importance of protecting natural areas. The number and area of officially protected areas will grow, with their status being upgraded as well, and new, comprehensive standards and managerial practices will be introduced and enforced. Efforts to reclaim important sites damaged by logging will also get under way.

Tourism development along the Black Sea coast will lead to coordination of efforts between Georgia and Russia to develop appropriate protection legislation and managerial practices, increasingly based on EU standards. Similar processes will develop in regard to the Caspian Sea coast, endangered by rising sea levels and, at least on occasion, oil pollution from new fields being developed and exploited.

Throughout the region, new instruments to introduce and implement environmental policies are developed, although with varying success. This leads to application of measures that were under-utilized or totally absent in the past, such as pricing, land use planning, zoning rules and infrastructure policies. Environmental education and information dissemination for all strata of the population will become a far more powerful policy instrument, even if their effects do not extend to all parts of the region. By the end of the scenario period, environmental problems will be considered on a par with social and economic development by both local governments and parts of the broader public.

Three very different futures for the Caucasus region have been presented in the preceding pages; in reality, the future is likely to consist of some combination of all three situations described. What is critical for readers of this report is to realise, in essence, that "the future is in our hands". That is, quite literally, decisions taken now by governments and civil society, as well as individuals, will have real impacts and a tendency to take the region down one or another of these paths into the future. At the very least, it is hoped that by describing different fates for the Caucasus, that wiser decisions can and will be taken by the multiple actors of society who have a role to play in determining the future.

