



## A SPECIAL AMBASSADORS' FORUM

# COMBATTING TERRORISM AMID COVID-19: A REVIEW OF 2020 AND FUTURE OUTLOOK

JUNE 2021

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## **NOTICES**

This forum opens discussion and observations Combating Terrorism Amid Covid-19: Review of 2020 and Future Outlook. In the face of expanding national, regional, and global health and security challenges, a distinguished panel of scientists, academics, and diplomats focuses on past lessons and future outlook. The contributors offer recommendations for governmental and non-governmental strategies to reduce potential risks at home and abroad.

Video of the full conference may be found here:

<https://www.youtube.com/watch?v=BN8cQqLzC8>

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### **A SPECIAL AMBASSADORS' FORUM: "COMBATING TERRORISM AMID COVID-19: REVIEW OF 2020 AND FUTURE OUTLOOK"**

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## I. PREFACE

**PROFESSOR YONAH ALEXANDER AND PROFESSOR DON WALLACE, JR.**

### EDITORS

The national, regional, and global spectrum of biological challenges is limitless. Throughout recorded history, these safety concerns stem essentially from two inevitable sources of enduring actual and potential dangers to individuals, communities, societies, and civilizations.

The first critical threat is caused by Mother Nature's disasters, such as earthquakes, cyclones, and infectious diseases. The second concern is man-made menaces, including violent radicalism, terrorism, and war. The key question is whether the United States and the international community are prepared to identify, prevent, and counter current and future biological threats.

This Preface of the current report on "Combating Terrorism Amid Covid-19: Review of 2020 and Future Outlook" (February 2021) offers an overview of the national and global implications of biological challenges, both natural and man-made, as well as providing a brief academic perspective.

#### **MOTHER NATURE AND MAN-MADE BIOLOGICAL THREATS**

Biological agents are micro-organisms too small to be seen with the naked eye and can include bacteria, viruses, and fungi. Some of the most serious viral agents are those that produce, for example, smallpox and yellow fever. Bacterial agents can induce the plague and Anthrax.

Biological threats are difficult to control as they require a delivery system, or "vector," that can make distribution difficult and dangerous. Furthermore, it seems likely that if terrorists were to use a biological weapon, they would probably choose a bacteriological rather than a viral or rickettsial agent due to available countermeasures as well as the difficulty of cultivating viruses.

In addition, toxins, the poisonous byproducts of micro-organisms, plants, and animals, fall somewhere between biological and chemical agents as they are non-living substances. Toxins are relatively easy to manufacture and extremely virulent. Botulinum toxins, for example, can be more toxic than some nerve agents on an equal-weight basis.

Moreover, many agents are considered capable of spreading disease among humans, animals, or plants. Disease develops when people and animals are exposed to infectious micro-organisms or to chemicals which are produced by such organisms. After an incubation period, during which organisms are multiplied, the disease may even cause death. Mention should also be made of a number of fungal pathogens, such as smut of wheat that is capable of destroying crops as well as resulting in famine and costly diseases.

Despite the wide array of biological challenges, historical and contemporary records provide extensive evidence regarding the nature, intensity, and health security implications of existing threats. These massive data sources also serve as a warning to beware of future catastrophic losses to human lives as well as political, social, economic, and strategic costs to those societies affected by biological pathogen attacks.

For example, in the 14th Century, the Black Plague wiped out 30-60 percent of Europe's population. Likewise, the 1918 influenza pandemic, regarded as the deadliest in modern times, killed an estimated 50 million people worldwide, about 675,000 of them in the United States. In addition, the Asian flu, originated in China in 1957-1958, resulted in the death of some one to four million people.

More recently, the sudden Ebola outbreak that began in 2014 presented a major health security challenge nationally, regionally, and globally. This deadly disease created unprecedented fear and anxiety over public safety, not only in parts of West Africa, but also in the United States, Europe, and elsewhere.

In fact, the Ebola virus reappeared in the Congo at different times during 2018-2020. Similar outbreaks as well as other contemporary health security challenges are anticipated in the future.

Mention should be made of the Zika virus infection that is spread by mosquitoes (which are also the vectors of many other diseases), sexually, and through blood transfusion as well as laboratory exposure. The disease causes microcephaly and many other birth defects. Another grave humanitarian concern is the cholera epidemic that has occurred in war-torn Yemen where more than 100,000 cases have been recorded by World Health Organization (WHO) sources, a quarter of them children. This disease is caused by bacteria from water or food contaminated with feces.

Supplementing Mother Nature's biological threats are man-made intentions and capabilities to deploy a wide range of weapons against perceived or actual adversaries in the struggle for power within and among nations. From the dawn of history to modern times numerous theologians, philosophers, politicians, military strategists, scientists, academics, and other participants and observers of the world's security concerns have underscored the continued trends toward mass destruction capabilities.

In sum, to prevent a potential "Black Plague"- like disaster as well as man-made threats, it behooves all nations to recall the warning in Shakespeare's King Lear. "We make guilty of our disasters the sun, the moon, and stars, as if we were villains on necessity; fools by heavenly compulsions..." (Act 1, Scene 2).

Bill Gates similarly asserted in a February 2017 Security Conference in Munich that "by the work of nature or the hands of a terrorist...an outbreak could kill tens of millions in the near future unless governments begin to prepare for these epidemics the same way we prepare for war."<sup>1</sup>

## **COVID-19: AN ACADEMIC CONTEXT**

COVID-19 alarmed the world in 2019 and 2020 because similarities with the SARS (the respiratory syndrome) some 18 years ago, which killed almost 800 people. On March 11, 2020 the WHO declared the escalating biological threat a pandemic and two days later registered 8,710,703 COVID-19 cases, which had resulted in a total of 225,817 deaths. By the end of February 2021, the United States registered 28,651,355 COVID-19 cases resulting in a total of 515,035 deaths. During the same period, the pandemic confirmed 66,846,689 cases with a total death toll of 2,584,833 worldwide.<sup>2</sup>

Many questions have arisen during the past year ranging from the exact origin of the pandemic in China, to whether the worst is yet to come, to what are the best response practices to prevent the next potential outbreaks.

In view of the expanding biological threats that pose continual and unprecedented security challenges to the United States and abroad, we organized a total of six Zoom conferences in 2020: "Combating Global COVID-19: From Isolation to International Cooperation" (March 26, 2020); "Combating Global COVID-19: A Preliminary Assessment of Past lessons and Future Outlook" (April 14, 2020); "Global COVID-19 and the Economy: Costs, Lessons, and Future Outlook" (May 20, 2020); "Global COVID-19 and Energy: Threats and Responses" (June 25, 2020); "COVID-19 and Sports: Threats and Responses" (July 30, 2020); and "A Lab of One's Own: Fighting Bioterrorism, Cholera, and COVID-19" (November 17, 2020). The videos of the six Forums are accessible at the ILI website ([www.ili.org](http://www.ili.org)).

Additionally, four printed publications drawn from the 2020 Events have already been released. The first is a Monograph on "Global COVID-19 and Sports: Exposure Claims and Liability Mitigation Considerations" published in September 2020. The second publication is an abbreviated version of the Monograph. It incorporated a slightly edited and updated Report on "Global COVID-19 and Sports: Threats and Responses" published in October 2020. That report consists of contributions by invited interdisciplinary panelists including Distinguished University Professor Rita Colwell (University of Maryland College Park and Johns Hopkins University Bloomberg School of Public Health); Dr. Richard B. Reff, MD (Orthopedic Surgeon and Sports Medicine Specialist); Carl Francis (Director of Communication at the National Football League Players Association); Chalana Damron, Tom Gies, Kristof Rook, and Laurence Winston (attorneys at Crowell & Moring); Ambassador (Ret.) Charles Ray (a former U.S. diplomat and military officer); and Ambassador Pjer Simunovic at the Embassy of Croatia. These publications are available to view at: <http://ili.org/about/news/1243-utcs-and-ili-host-ambassador-s-forum-global-covid-19-threats-and-responses.html>.

The third printed Report on "Combating Global COVID-19: From Isolation to International Cooperation" (November 2020) consists of contributions by invited interdisciplinary panelists at our Ambassador's Forum on the same topics that was held on March 26, 2020 via Zoom conferencing and hosted by the International Law Institute (ILI). Speakers at this Ambassador's Forum included Dr. Roberta DeBiasi (Chief of the Division of Pediatric Infectious Diseases at the Children's National Hospital); Dr. James Giordano (Professor in the Departments of Neurology and Biochemistry at Georgetown University Medical Center); Ambassador (Ret.) Charles Ray (Former U.S. Ambassador to Cambodia and Zimbabwe); Ford Rowan (Chairman of the National Bureau for Counter-Terrorism at the U.S. Department of State); Dr. Daniel Gerstein (Former Acting Undersecretary and Deputy Undersecretary for the Department of Homeland Security); Dr. Richard B. Reff, MD (Orthopedic Surgeon and Sports Medicine Specialist); and Dr. Tevi Troy (CEO of the American Health Policy Institute). This printed Report is available at:

[https://potomac institute.org/images/ICTS/ICUTS\\_COVID%20Isolation%20and%20Cooperation%20Report.pdf](https://potomac institute.org/images/ICTS/ICUTS_COVID%20Isolation%20and%20Cooperation%20Report.pdf)

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<sup>1</sup> Avi Selk, "Bill Gates: Bioterrorism Could Kill More Than A Nuclear War – But No One Is ready To Deal With It." *The Washington Post*, February 18, 2017.

<sup>2</sup> The statistical data is drawn from the John Hopkin's University global COVID-19 data, March 1, 2021.

The fourth printed Report on “A Lab of One’s Own: Fighting Bioterrorism, Cholera, and COVID-19” (December 2020) is a slightly edited transcript of the initial Zoom conference held on November 17, 2020. Featuring a conversation with our friend and Distinguished University Professor Rita Colwell in honor of her latest acclaimed book titled “A Lab of One’s Own: One Woman’s Personal Journey Through Sexism in Science,” published by Simon and Schuster in August 2020. Her compelling and inspiring memoir/manifesto, written in collaboration with Sharon Bertsch McGrayne is indeed an exceptional contribution to global health and security concerns.

Participating in the November 17, 2020 discussion with Professor Rita Colwell are our two commentators, Dr. Norman Kahn (National Security Consultant) and Dr. Vinton G. Cerf (Vice-President and Chief Internet Evangelist at Google). This printed Report is accessible at:

[https://potomacinstitute.org/images/ICTS/IUCTS\\_LabofOnesOwn\\_RitaColwell\\_2020\\_F.pdf](https://potomacinstitute.org/images/ICTS/IUCTS_LabofOnesOwn_RitaColwell_2020_F.pdf)

Finally, the current report on “Combating Terrorism Amid COVID-19: Review of 2020 and Future Outlook” consists of invited interdisciplinary academics and practitioners who participated at an Annual Ambassadors’ Forum “Combating Terrorism Amid Covid-19: Review Of 2020 And Outlook For 2021 And Beyond” that was held virtually on February 25, 2021 at the International Law Institute.

Opening remarks were made by Professor Don Wallace, Jr. (Chairman, International Law Institute); Dr. Jennifer Buss (CEO, Potomac Institute for Policy Studies); and Professor Robert Turner (Center for National Security Law, University of Virginia); This event was moderated by Professor Yonah Alexander (Director, Inter-University Center for Terrorism Studies).

Speakers included Distinguished University Professor Rita Colwell (University of Maryland College Park and Johns Hopkins University Bloomberg School of Public Health); Hon. Richard Prosen (Deputy Director, Multi-Lateral Affairs Bureau of Counter Terrorism U.S. State Department); Hon. Guy B. Roberts (Former US Assistant Secretary of Defense for WMD Policy); and Ambassador (Ret.) Charles Ray (Former U.S. Ambassador to Cambodia and Zimbabwe).

Three invited commentators also contributed to the discussion: Professor Natividad Carpintero-Santamaria (Professor at the Polytechnic University of Madrid (UPM) and General Secretary of the Instituto de Fusión Nuclear “Guillermo Velarde”); Dr. Milton Hoenig (Physicist); and Ambassador Pjer Simunovic at the Embassy of Croatia The entire Forum can be viewed at: <https://www.ili.org/about/news/1269-ili-hosts-combating-terrorism-amid-covid-19.html>.

## **ACKNOWLEDGEMENTS**

Professor Alexander wishes to express his deep appreciation for the decades-long academic partnership with the International Law Institute (ILI) and the Potomac Institute for Policy Studies (PIPS). He is most grateful to Professor Don Wallace, Jr. and Robert Sargin and ILI staff as well as the PIPS leadership of Dr. Jennifer Buss (CEO), General Al Gray (USMC (Ret.), Chairman of the Board) and Gail Clifford (VP for Financial Management & CFO).

Beginning in January 2021 Kevin Harrington (Master’s Degree, Public Safety Administration) was appointed to serve as a Research Associate at the International Center for Terrorism Studies (ICTS) administered by PIPS. Kevin has already assisted in the publication of the first 2021 report and coordinated the research of the ICTS interns: Victoria Airapetian (University of Maryland, College Park graduate, Daan de Zwart (the University of Amsterdam graduate), Matthew Phenenger (Ohio Wesleyan University graduate), and Virag Turcsan (Erasmus Mundus Joint International Master's degree).

## II. SELECTED HIGHLIGHTS

1. Money previously allocated for counterterrorism purposes cannot be cut to fight the pandemic.
2. Prevent terror organizations from exploiting the pandemic.
3. Identify the virus, its variants and the health of communities through sewage and wastewater monitoring.
4. Achieve 70% vaccination rate to develop protected herd immunity.
5. Address pandemics as one of the greatest threats to humanity.
6. Conduct a comprehensive threat assessment.
7. Achieve better information sharing.
8. Support efforts to prevent radicalization.
9. Disrupt violent extremist networks.
10. Improve information sharing at ports of entry using INTERPOL I-24/7.
11. Utilize Project INSIGHT to ensure comprehensive investigative assistance on transnational crime and terrorism cases.
12. Bring investigative information and evidence from conflict areas to countries of origin to support repatriation and prosecution.
13. Use material collected by militaries-“battlefield evidence” to ensure successful criminal cases in civilian courts.
14. Fund prevention for a bio-attack from reaching the proportions of a pandemic.
15. Prevent the deliberate misuse of gene editing tools technologies like CRISPR to ensure terrorists cannot create bio-weapons.
16. Develop a “Manhattan-like” project focusing on nine vulnerable areas of bio-defence.
17. Defend against cyber-attacks on critical infrastructure.
18. Al Qaeda and the Islamic State are gaining traction despite being weakened and dispersed in 2020.
19. Far right extremism is prevalent in the West where domestic terrorism presents grave security threats.
20. Extremist terrorist acts are likely to rise in 2021, particularly in the West, due to political polarization, economic inequities, and the COVID-19 pandemic.
21. Politicians must reduce partisan rhetoric and bickering among themselves, as well as encourage their constituents to do the same.
22. Media outlets and social media must improve monitoring and limiting the spread of disinformation and conspiracy theories
23. The public must exercise better judgment in the intake of information, learning to distinguish between fact and fiction.
24. We must enhance biological security culture in society in order to ensure society is prepared to face radioactive and nuclear materials challenges.
25. We must take into consideration technological advances and insider threats when addressing face radioactive and nuclear materials challenges.
26. We must pursue counteractive measures such as providing society with knowledge on radiological issues, stating proactive communication policies, and disseminating FAQs on minimizing the effects of radiation and the use of panic as a weapon.
27. The severity of radioactive and nuclear materials threats should not be underestimated simply because there has yet to be a major terrorist attack involving such weapons.



28. Broaden the scope of the program beyond the limits of the current nuclear deal while taking into account Iran's June presidential election.
29. Put in place long term limits on Iran's uranium enrichment and fuel reprocessing.
30. Achieve a long-term deal with a range of global partners to ensure security and stability that could lead to a WMD free zone in the Middle East.
31. We will most likely gain gradual control of the COVID-19 pandemic, however additional strains and affiliated threats will emerge for which we must develop contingency plans.
32. The COVID-19 pandemic has largely overshadowed terrorism concerns but there is an emerging trend of interstate confrontation and terrorism which present pressing security threats, particularly through the use of the internet.
33. The COVID-19 pandemic has been a stress test for the scientific, security, and international communities, as well as exposed our vulnerability to the whims of mother nature and made clear the need for a shift to strategic autonomy.
34. The seriousness and deadliness of our vulnerability to biohazards must not be understated.
35. Social and political radicalization are global trends that are exacerbated by the reach of the internet and social media. As such, we must deal with the hostile and dangerous flow of ideas on the internet, striking a delicate balance between individual freedom of expression and ensuring one's freedom does not infringe on another's.
36. The changing threat environment means that we must reevaluate our approaches more frequently than in the past as disruptive technologies are emerging and disrupting the way society operates faster than they used to.
37. An emerging horizon threat is the incoming flux of biotech and medical threats towards precision medicine which is changing the relationship technology has with the individual.
38. The COVID-19 pandemic provides us with the opportunity to develop strong defense capabilities against biological threats.
39. The COVID-19 pandemic further reinforces the need for a global cooperative effort to address these problems as they occur, to identify them, and to put measures in place to prevent them.
40. We still need a major educational mission to teach the next generation how to cope with the next pandemic of terrorist threats.
41. The threat posed by cyber-attacks is and will influence every aspect of our society and has the potential to be included as a weapon of mass destruction.
42. The changing threat environment and climate change must be prioritized by the human race.
43. The events of January 6, 2021 will allow us to learn a lot about ourselves; they will enable us to mobilize a different dimension and to restore some sanity and a sense of judgment to the United States.
44. Optimism is the required strategy, if there's no reason for optimism, then you better find one because it's the only way we can function in all these matters and only then can we begin to address specifics.
45. The solution is more dialogue and the exchange ideas rather than suppression. We must set aside partisanship, particularly in foreign affairs.

### III. OPENING REMARKS

**DR. JENNIFER BUSS**, CEO, *Potomac Institute for Policy Studies*

Thank you, Yonah, for the kind introduction and thank all of you for being a part of this forum today. I am grateful for the opportunity to welcome you. Yonah provided a great introduction about the Potomac Institute. One of the things we've studied over the last twenty-five years is disruptive threats that arise from science and technology, as well as all of the changing social and policy environments that are now in play. Terrorism, as all of you know, has been very disruptive for decades and that's not changing; but what is changing is the way terrorists are now attacking society with the available technology. Yonah has hosted countless seminars over the last twenty years focusing on the different types of disruptive threats that terrorists are using to their advantage. The Potomac Institute studies these topics across the board, more recently we're seeing more cases of cyber-terrorism, but conventional terrorism isn't going away. It's more important than ever that we continue this discussion and that we continue to stay focused on this as the most critical topic. I'm very proud to welcome all of you today and I'm looking forward to a robust discussion on the challenges facing us today.

**PROF. ROBERT TURNER**, SJD, *Center for National Security Law University of Virginia*

Thank you, Yonah. It is an honor to be here today. Yonah and I go back, as he said, to the 1980s, Don Wallace and I go back many decades as well. I want to thank the Inter-University Center for Terrorism Studies and the Potomac Institute for hosting this important event. There are not many groups that can compete with either in terms of their contributions to the important issues facing us today.

We have a very distinguished panel today. I can't refrain from saying a special hello to my old friend, the Honorable Guy Roberts. When I was the Stockton Professor of International Law at the Naval War College twenty-five years ago, Guy was a Marine Colonel and a student there who graduated first in his class. Guy went on to be a senior fellow at our UVA Center for National Security Law and was a co-editor of our 1600-page National Security Law and Policy casebook and other Center publications.

The threats caused by the COVID-19 pandemic are numerous: Some are obvious, others less so. The International Monetary Fund has estimated that by the time it is over, the pandemic will cost the world nearly \$40 trillion. That is going to require some governments to reallocate resources. And one of the big fears, and it's happened already in some cases, is they will take money previously allocated for counterterrorism purposes and put it into fighting the pandemic; and/or cut foreign assistance to poorer countries that are victims of transnational terrorism. Both of these could have a devastating effect in the global struggle against terror.

The lethality of COVID-19 has increased the interest of transnational terror groups in acquiring biological weapons that are far more devastating than car bombs or flying airplanes into large buildings. Terrorists have reportedly been recruiting Ph.D.'s with expertise in this area and have encouraged them to study scientific journals to learn more about biological agents.

This is a very serious problem. The loss of more than two and a half million lives has understandably angered people. Family, friends, and others all over the world mourn pandemic victims, and millions resent being cooped up at home dealing with the pandemic. This has caused frustration and along with dealing with new government restrictions has contributed to what Lenin used to call a "revolutionary situation" that encourages violent dissent and support for extremism.

Perceptions of discrimination do further harm. For example, delivering vaccines that require storage in extreme cold temperatures is inherently easier in developed countries than in countries that in some areas lack even access to electricity. This will likely contribute to anger—making citizens who perceive they are not being treated fairly more receptive to radical causes.

People around the world are spending more time online since they are confined in their homes, and to exploit that terrorist groups have been stepping up their Internet propaganda efforts. Schoolchildren, instead of being in classrooms, are at home on computers and some of them are being radicalized by these websites as well. We are not just talking about Islamists: we also have problems with far-right terrorists.

ISIS and Al Qaeda welcomed COVID-19 and described it as a plague sent by Allah to destroy infidels. They have encouraged people infected with the virus to visit public places in an effort to infect others. Repressive governments have used the pandemic as an excuse to violate human rights and increase oppression. China, for example, has used the pandemic as an excuse to crack down on freedom in Hong Kong. Such oppression can facilitate terrorism; but, by itself, it is inherently harmful and should be of concern to anyone who cares about human freedom.

These are but a few of the issues raised by the COVID-19 pandemic of relevance to the struggle against terrorism. They are extremely important, and we are all indebted to Yonah, the Inter-University Center for Terrorism Studies, and the Potomac Institute for Policy Studies for assembling such a distinguished panel of experts. Let me turn the microphone back to Yonah so we can hear from the real experts.

#### **IV. CONTRIBUTORS' PRESENTATIONS**

This section of the Report consists of presentations made by the contributors at the 21ST Annual Ambassadors' Forum: "Combating Terrorism Amid Covid-19: Review Of 2020 And Outlook For 2021 And Beyond" that was held on February 25th, 2021 via Zoom conferencing. Some updates and revisions were made by the invited participants.

##### **DISTINGUISHED UNIVERSITY PROFESSOR RITA COLWELL**

*University Of Maryland, College Park; Johns Hopkins University, Bloomberg School of Public Health*

Biological threats continue to pose a danger to human health. The anthrax episode of 2001-2002 served as a warning and the COVID-19 pandemic illustrates all too vividly the economic, social, and national security costs of a biological threat. Pandemics have affected human populations for centuries and the COVID-19 pandemic is reminiscent of the Justinian Plague in the 5th Century (Fig. 1). Clearly, we have much to learn about pandemics. The National Science Foundation recently conducted a series of workshops on predicting and responding to pandemics.

Nucleic acid sequencing technology allows detecting the COVID-SARS-2 virus and its variants in various types of samples, including wastewater, providing an ability to monitor the health of a community effectively by monitoring wastewater and sewage for the virus. This development suggests medical examinations in the future will include analysis of stool, as well as blood and urine to assess health. Scientific developments of the past forty years have provided tools for analysis of the mix of microorganisms, the microbial flora, of the human gut, skin, nasal passages, etc. that influence human health and wellbeing. One might say that we are essentially comprised predominantly of microorganisms, a composite of about 80% microorganisms.

Detection of the COVID-19 virus and its variants in wastewater allows an early warning of COVID-19 cases in the community, four to seven days in advance of patients with symptoms of disease in increased numbers at emergency rooms of hospitals. This diagnostic approach to public health, with respect to COVID-19, is not unique and is currently being initiated in nearly every state since onset of the pandemic. In Maryland, we provide the Governor of the State the results of analyses being done on a routine basis at ca. fifty locations, including sewage treatment plants and other sites in various parts of the state, i.e., college dormitories, assisted living centers, and hospitals. This sampling regime allows determination of the presence of the virus within a community and then quickly isolating the source of the virus based on its detection in wastewater, e.g. discharge from a specific building, allowing tracing infected individuals within the building, avoiding shutting down an entire campus or assisted living facility.

Another recent development is the use of satellite sensors that measure environmental parameters, e.g., dew point temperature and land temperature and monitor the geolocation, including migration of populations. Computational models then allow for a county by county prediction of the risk of COVID-19. Bio-threats, of which the COVID-19 virus is now a prime example, are very serious and incredibly expensive in terms of loss to the global economy. Unfortunately, nuclear threats and potential adverse action of a rogue nation with access to nuclear weapons appropriately have our attention, but COVID-19 has demonstrated the danger and destructive power of a biological threat. Fortunately the response to COVID-19 in producing vaccines has been remarkably successful. It is now very likely that by the end of 2021 ca. 60-70% vaccination of the population of the U.S. will be achieved, essentially a protective "herd effect" of sufficient number. Problematic, however, is that it yet to be determined whether vaccinated individuals shed the virus. It is known that asymptomatic infected individuals can shed the virus but whether that continues after vaccination is not known. Thus, much scientific research remains to be done, notably on variants of the COVID-19 virus, and other members of the virus family Coronaviridae. That family of viruses includes the human influenza virus, of which variants arise continually. Thus, it can be anticipated that booster vaccinations with vaccines addressing variants will be necessary well into the future. Clearly, bio-threats do great damage globally and protection must be developed, particularly to mitigate and/or prevent future threats to humanity, a danger second only to climate change.

## HON. RICHARD PROSEN

*Deputy Director, Multi-Lateral Affairs Bureau of Counter Terrorism U.S. State Department*

First, a heartfelt thank you to Professor Alexander for the invitation to speak today. Also, allow me to express my appreciation to this timely event's co-sponsors, a "well done" to all who've helped pull this virtual forum together, greetings to my fellow panelists and speakers, and a warm welcome to all joining us today. Before I begin, allow me to state that my remarks are off-the-record and the opinions and points expressed today are my own and do not necessarily reflect the views of the United States government, the U.S. Department of State, or the Bureau of Counterterrorism. In my remarks, I'd like to reflect on how we can work collaboratively to address terrorism-related challenges within the context of the global health crisis we all face. Let me state one fairly obvious point at the outset, and that is with more and more people online in the COVID era, internet-based security threats can be exacerbated, and even proliferated in certain instances.

### Racially or Ethnically Motivated Violent Extremism (or REMVE)

First, let me address Racially or Ethnically Motivated Violent Extremism (or REMVE) related challenges. The threats from REMVEs are transnational, with groups and individuals recruiting, radicalizing, and sharing tactical training online and in-person. REMVEs communicate, recruit, radicalize, fundraise, and share weapon-making instructions transnationally. U.S.-based REMVEs communicate with and travel to engage with foreign REMVE actors and groups. In our view, REMVE threats to the United States and our interests are most likely to come from lone actors who've communicated online with other REMVEs and become motivated or inspired to conduct attacks. The Administration has prioritized our efforts to better understand and map the transnational linkages and connections between REMVE groups and individuals. The January 6 assault on the Capitol and the tragic deaths and destruction that occurred underscored what we have long known: the rise of domestic terrorism or REMVE is a serious and growing national security threat. The White House is now coordinating an interagency review, which broadly falls into three areas:

- 1.] Conducting a comprehensive threat assessment;
- 2.] Building USG capabilities beginning with a policy review effort to determine how to better share information about this threat, support efforts to prevent radicalization, disrupt violent extremist networks, and more; and
- 3.] Coordinating relevant parts of the federal government to enhance and accelerate efforts to address these threats. The Biden Administration has committed to confronting this threat with the necessary resources and resolve and is developing policies and strategies based on facts, on objective and rigorous analysis, and on our respect for Constitutionally-protected free speech and political activities.

Last year, the State Department designated the Russian Imperial Movement (or RIM) and three of its leaders as Specially Designated Global Terrorists. RIM is a white supremacist group based in St. Petersburg that has trained people to commit terrorist acts. After the RIM designation, we engaged U.S.-based technology companies, which subsequently removed RIM accounts and content from their platforms. A RIM leader recently told an American journalist that one of the most devastating impacts of the designation was that Facebook had shut down its webpage, resulting in the loss of years' worth of information and hampering the group's reach. The RIM designation in 2020 was the first time the United States has sanctioned white supremacist terrorists, illustrating how seriously we take REMVE as a counterterrorism issue.

Looking back, the United States, in close cooperation with Iraqi and Coalition partners, eradicated the so-called territorial caliphate. Together with our partners, we've liberated nearly 8 million men, women, and children from ISIS's reign of terror. Four million displaced Iraqis have returned home, and the former ISIS Amir, Abu Bakr al-Baghdadi, was removed from the battlefield in 2019, while Abu Muhammed al-Masri, al-Qa'ida's (AQ) worldwide #2, was eliminated last year. We know, however, that ISIS, its affiliates, and supporters see these losses as setbacks, not defeat. Battle-hardened terrorists are heading home or wreaking havoc in third countries, and ISIS is adapting to survive, which puts a greater premium on our use of non-military tools to counter the group in areas outside of Iraq and Syria. And while the world has focused on ISIS, AQ has quietly rebuilt its capabilities and is seeking to reestablish itself as the vanguard of the global jihadist movement. Today's AQ relies on an international network that rivals ISIS in its geographic scope, capability, and intent. Like ISIS, AQ maintains affiliates in countries throughout Africa, the Middle East, and South Asia.

With law enforcement increasingly at the forefront of our global fight against terrorism, to effectively counter these evolving threats national authorities need to employ modern tools and devote sufficient resources to prevent terrorist travel and successfully prosecute terrorists.

### Preventing Terrorist Travel

Improving information sharing is critical for countering terrorist travel and strengthening border controls at ports-of-entry. Terrorists' continued manipulation of the travel sector is what motivated the adoption of United Nations Security Council Resolution (UNSCR) 2396 – a landmark resolution that focuses on preventing terrorist travel. UNSCR 2396 requires states to develop and use watch lists; expand efforts to share information both within governments and with foreign partners; collect and use biometrics; and collect and analyze traveler data, including advance passenger information and passenger name records. By implementing this resolution, we can prevent terrorists from reaching our shores and stop them from launching attacks against our citizens.

As I work on multilateral issues, I'd like to highlight that INTERPOL (or the International Criminal Police Organization) has important tools to counter terrorism. Specifically, UNSCR 2396 calls upon member states to contribute to and make use of INTERPOL's databases. The United States is the largest contributor of foreign terrorist fighter (FTF) information to INTERPOL. In addition, the United States has been working to get countries' borders connected to INTERPOL's I-24/7 network, which is a secure communications system providing access to INTERPOL's databases and services in real-time. Enhancing I-24/7 connectivity has been a shared G7 and European Union priority since 2016. The United States helped enhance INTERPOL connectivity in more than a dozen key partner countries. For example, our project in Indonesia connected the 44 most traveled international airports, seaports, and land ports of entry to I-24/7, enabling the Customs and Excise Directorate General to screen approximately 99 percent of all international passenger traffic against INTERPOL databases. Moreover, to integrate INTERPOL's disparate datasets and enable more sophisticated analysis, the State Department has funded Project INSIGHT – a digital analytical platform that will enable analysts to quickly query INTERPOL's databases and criminal analysis files, perform link and trend analysis, and ultimately provide comprehensive investigative assistance on transnational crime and terrorism cases.

## **PROMOTING SUCCESSFUL PROSECUTIONS**

We also need to make sure that detained terrorists are held accountable for their actions. We are working to help ensure that law enforcement and prosecutors have the necessary authorities, tools, and resources to investigate and prosecute terrorist offenses in national courts. Information sharing is critical to bring investigative information and evidence from conflict areas to countries of origin to support the repatriation and appropriate prosecution of alleged terrorists. As you are all aware, the Syrian Democratic Forces captured thousands of FTFs as they liberated territory in Syria and put an end to ISIS' so-called "caliphate." Having won a decisive victory on the battlefield, the international community needs to act swiftly to ensure the facilities and camps do not become incubators for ISIS 2.0. The United States is leading by example and has repatriated our own citizens, while bringing criminal cases against those who can be prosecuted. To date, we have repatriated 12 adult American citizens and 16 U.S. minors from Syria and Iraq. We've also helped over a dozen countries repatriate roughly 800 of their own citizens, both fighters and family members. And we've supported these countries by building the capabilities they need to rehabilitate and reintegrate returning family members.

Let me share with you a prosecutorial success story that helps illustrate how material collected by militaries – so-called "battlefield evidence" – can be employed to build successful criminal cases in civilian courts, even many years after the data was first obtained. Anis Abid Sardar was a member of a bomb-making cell in Iraq in 2007. Two months after an attack in which an IED he built killed an American soldier, he entered the UK via Syria. UK border control took his fingerprints at Heathrow airport. Meanwhile, a U.S. military unit had recovered the components from that IED and several other attacks, sending them to the FBI for processing. Seven years later, Sardar's fingerprints were found on two of those bombs, and a UK court sentenced him to 38 years in prison on murder and conspiracy charges. INTERPOL also plays a key role in supporting enhanced terrorist investigations. With coordination and assistance from the Department of Justice's U.S. National Central Bureau for INTERPOL, the United States has shared information collected by Coalition forces in Iraq and Syria via I-24/7 to help foreign law enforcement partners identify known or suspected terrorist activity. The resulting flow of information on FTFs and their activities, support networks, travel routes, and demographics has contributed to numerous successful counterterrorism investigations in Europe and North Africa. Targeted information-sharing is a crucial brick in the line of defense against terrorist travel and helps strengthen investigations and prosecution.

## **CONCLUSION**

In a volatile terrorist environment where there are no JV terrorists nor geographical limits to terrorism, we must remain vigilant to new risks and hazards. Today, we spoke of terrorist challenges related to REMVE and global jihadist terrorist organizations, such as ISIS and AQ, and I briefly touched upon our recent policy priorities and action-oriented responses to these global threats. As the world is rightly focused on grappling with the COVID pandemic this necessarily has resource impact implications for addressing key security issues. The call here today is for us all to work together, closely engage, and collectively address the most pressing and rapidly metastasizing terrorism challenges.

**HON. GUY ROBERTS**

*Former US Assistant Secretary of Defense for WMD Policy*

It is indeed a pleasure once again to participate in one of these very useful events with some very distinguished panelists. I feel honored to be a part of this group and the pleasure to see many old faces again. There's a big tendency to reminisce and go back many years especially when you have lived down in Florida, where I think almost everybody here is retired or semi-retired. So being part of that group, I guess I should talk to you also about my medical conditions for about 10 minutes.

I think it is important since I've been here for a year now, and I have to say the way that people view things and our expectations about things is a big difference from the way I looked at things when I was living inside the Beltway and the Washington D.C. area. A lot of the things that we adapt as policies or think are good ideas don't necessarily translate as well or the money that is needed to do those things is not available for one reason or another.

Again, there is no better example than the COVID-19 pandemic that we've seen how infrastructure is affected, and I'd like to talk about that in a minute, because I think it's a very telling how the system was absolutely not in place to deal with something of such catastrophic proportions. We have over 31,000 dead from the virus here in Florida and over 2,000,000 people that have tested positive. That number seems to continue to grow, but the good news is we do have a vaccine and I was vaccinated. I'll get my second shot in March and that's all I'll say about my medical condition for now. Because of the pandemic I think it's important to focus a bit on the one thing that I've always felt has been just as big a threat as a nuclear attack and that is a bio attack of the proportions that would rise to the level of a pandemic. Certainly, we've already seen in economic terms how incredibly expensive and costly a pandemic like this would be.

I can't help but reflect back to when I was in the Bush administration in 2005 and President Bush proposed a response to the threat of a pandemic. He suggested and proposed many of the things that need to be done that Congress refused to fund. If in fact we had spent the money to do all of those things in those areas we would have been in a much better position than we find ourselves today. Because of the all too evident economic and social disaster that COVID-19 has brought, I believe those consequences have increased the risk of a bio-terror Terrorists have observed how severely democracies, particularly democracies in the West, have been affected by this virus.

Again, considering our lack of preparedness, we've done I think very well, and in fact I think Rita would agree it's almost a miracle that we were able to develop a vaccine in less than a year. I mean that's just tremendous and it shows you what we can do in fact when we're faced with these kinds of biologically based threats. Our demonstrated vulnerability in the United States (and our allies) to something like the COVID-19 virus has shown to those who would harm us the possibilities of a bio attack.

Developed democratic countries are the principal targets of terrorist groups, and unlike the difficulty in obtaining uranium-235 or plutonium to make nuclear weapons, we have revolutionary new technologies like CRISPR, which for the uninitiated is Clustered Regularly Inter-spaced Palindromic Repeats. This technology lessens the threshold for terrorists' acquisition of bio-weapons. In fact, it's quite obvious we're in the midst of revolutionary period in the life sciences, and while they are beneficial and amazing technologies, there is growing risk that the same science will be deliberately misused and the consequences could be absolutely catastrophic. These new gene editing tools, widely and cheaply available to anyone, might be used to produce biological weapons of unfathomable destruction. We know that ISIS and other terror groups have acquired and experimented with materials to create biological weapons. Additionally, authoritarian regimes, some of whom are known to have biological and weapon programs, may believe that they are comparatively less vulnerable, or they don't care about their populations when it comes to bio-weapons, therefore, making them less risk-adverse to their development and use.

When we think about these things and we look at all of the areas that we needed to address, I would like to propose that one of the ways that we can actually make ourselves less vulnerable to bio attacks and future pandemics is to have a Manhattan-like project to address the vulnerabilities. Now there are at least nine areas in bio-defense capabilities and for whatever type of attack or threat we face, whether it's a naturally occurring pandemic or in fact a broad terrorist attack using some artificially produced agent or pathogen.

Those nine areas we've shown to be lacking in response capabilities. For example, early disease detection and monitoring, we've had challenges there, but we've gotten better. Of course, more needs to be done. Having, in that regard, a national surge capability, the ability to rapidly respond in a very short period of time if we're going to effectively respond to the next epidemic or pandemic.

Since disease knows no borders, international cooperation is necessary although until now it has been problematic at best. For example, when I was at NATO we tried to establish a virtual stockpile of vaccines and asked countries to virtually produce and not a single country did. They wouldn't even offer a virtual vaccine capability. So that has been and will remain a challenge as we've seen the reluctance of countries to share capabilities. Of course, that's also been a big complaint for lesser developed countries as well.

Supply chain management, again, another critical area where we've seen the deficiencies in our ability to rapidly get materials and vaccines to our population. The public health system capacity is another area that needs a lot of work and should be done, in my view, in a very holistic approach in partnership with national, state and local responders.

A long pole in the response tent is vaccine development, we all know the problems in development issues there. It is a miracle that we've developed a vaccine to COVID-19 in less than a year. New pathogens will present difficult challenges to a similar response. Medical treatment and therapeutics is another area that we need a lot of work in, however, the available time limits me to discussing in more detail.

Finally, public education and communication. We've seen the misinformation and disinformation that has challenged our response capabilities. This too needs major focus.

Now all those areas are being addressed in more or less independent ways by national and local governments. To be effectively responsive to epidemic and pandemic threats I would suggest that we need almost a Manhattan-like project where we have an overarching policy that brought all these areas together, and we work to make our response capability, that bio-defense capability, one where terrorists contemplating the use of pathogens would think twice about trying to use such a weapon.

Earlier I mentioned the challenge of supply chain management. It's well known that our logistical support system is vulnerable to attack, particularly in a combination of chemical or biological agents with a cyber-attack.

On the 8th of February, in a town called Oldsmar right next to Clearwater, where I live less than 10 miles away. On the 8th of February, using a remote access program shared by the plant workers a hacker breached the system and proceeded to dump sodium hydroxide in the water supply by a factor of 100 from 100 parts per million to 11,100 parts per million. Sodium hydroxide is used to treat water acidity, but it's found in cleaning supplies such as soaps and drain cleaners and it can cause irritation, skin burns, and in large quantities death.

Luckily, after a few hours one of the workers noticed that somebody had taken over the system and watched as the little mouse arrow moved around and started dumping more and more of these materials into the water system and was able to intercept it.

We now see that these utilities have these remote access systems that are very vulnerable. It's very easy for hackers, because of the underfunded local government infrastructure, to in fact take over these things and we've seen these in the past. Remote access to industrial control systems such as those running water treatment plants have become increasingly common.

In fact, Russian-backed hackers have, in recent years, penetrated some U.S. industrial control systems including power grid and manufacturing plants. Iranian hackers were caught seizing control of the New York dam in 2013. We even had a case in Israel last May, where they thwarted a major attack against their water systems when there was an attempt to dump huge amounts of chlorine in the water and other chemicals. They were able to stop that and that attack was attributed to Iran.

What was interesting about what happened in Oldsmar here was that in the debate, the company that ran the remote access system said, "well we put in place controls that make sure that won't happen again." But a survey of the other towns around the area was conducted and it was discovered that all of them had similar vulnerabilities.

When you look at the whole food chain, if you will, and especially local and state government facilities, it's very evident that there's lack of resources to institute the safeguards and protections to make them less vulnerable. There just isn't enough resources to do that and then there is not the political will to do that. Even though we have good policy set by the national government, including a the national strategy to combat bio terrorism that was published in 2018 and a number of these proposals, it's very difficult to get Congress to fund many of these policies and it's even more difficult for states and local governments to fund and implement them as well. The Oldsmar incident is a good example that points out the vulnerabilities of local systems in attacks using chemicals or biological agents both from the cyber standpoint as well as the material standpoint.

## **AMBASSADOR [RET.] CHARLES RAY**

*Former U.S. Ambassador to Cambodia and Zimbabwe*

You know on the subject of terrorism, 2020 was a year of mixed blessings. While some international terrorist groups, most notably the Islamic State, were weakened and dispersed, this dispersal has unfortunately made them harder to target and the return of many Islamic State fighters to their countries of origin has only exacerbated extremist situations in those countries. Al Qaeda, which has also been weakened in the Middle East, has gained ground in Africa, as has the Islamic State, and Al Qaeda-affiliates accounted for nearly half the world's total terrorist incidents in 2020. In the West, the problem we've seen is far-right extremism, which is on the rise with a more than 200% increase since 2014, and with far right extremists accounting for 82% of deaths that were termed "terrorist caused." In 2021, we're likely to see an increase in extremism and terrorist acts, with Islamic State and Al Qaeda-affiliates committing acts abroad, and domestic extremists, primarily right-wing groups in the West. In the US, our political divisiveness, dissatisfaction with the results of the 2020 election, and COVID-related issues are likely to fuel anger and provide pretexts for groups from the right and left to commit acts of violence. We've already seen such an act with the January 6 assault on the US Capitol by right-wing groups. And on January 27th this year, the US Department of Homeland Security issued a bulletin stating that we can expect more such activity in the coming year.

Looking back at the year 2020, the Islamic State began the year in a weakened condition, having lost all the territory they previously controlled. Many of their fighters returned to their countries of origin, which unfortunately adds to the volatile mixes already there and the dispersal has made Islamic State fighters much harder to target. Al Qaeda, while it was significantly weakened in the Middle East, has gained ground in Africa, including West Africa, North Africa, and in the Horn. Al Qaeda-affiliates, such as Al Shabab in Somalia, accounted for nearly half the world's total terrorist incidents in 2020. For example, on January 9th, 2020 an attack on a military outpost in the country of Niger, an Islamic State-associated group killed 79 people and injured several others; and on January 18th of that same year, an Al Qaeda-affiliate staged a suicide car bomb attack in Somalia.

Attacks by extremist groups in the West also increased in 2020. Far-right and white supremacist groups accounted for the greatest number of attacks and fatalities in 2020 and into 2021. With the exception of the September 11th, 2001 attacks, which caused the greatest number of fatalities in a single incident, far-right groups, such as the Boogaloo Boys, Q-Anon, the Proud Boys, and the Three Percenters Movement, accounted for the largest number of attacks and casualties in the United States in 2019 and 2020. Far-left and antifascist groups also carried out violent attacks, but in 2020 accounted for only 20% of such attacks, as compared to 41% by far -right groups.

What's ahead for us this year? According to some experts, extremist and terrorist activity is likely to increase in 2021, particularly in the West and in the United States. While religion, political polarization, and economic inequities fueled many extremist movements, the impacts of the COVID-19 pandemic are also positive factors that will provide a pretext for many of these groups to engage in violence. In the US, for example, anger over the outcome of the 2020 election, caused by the false narrative of a stolen election, continues to motivate many of the far-right groups, as do opposition to COVID-related restrictions such as mask wearing and the closure of nonessential businesses. This is not to say that international terrorist groups will not continue to be of concern but the events of January 6th, when a mob stormed the US Capitol, brought home the realization that domestic terrorism also impacts us here in the United States. In fact, according to the FBI and the Department of Homeland Security, domestic groups currently represent a greater threat to US security than do international groups. Despite rosy pronouncements from the previous administration and the best efforts of the current one, we still have not truly turned the corner on the COVID-19 pandemic and even when we have finally reached a point where infections, hospitalizations, and deaths have declined to—and I shudder at saying this—manageable levels, we'll still face a long period of economic recovery. The threat of violence, therefore, is likely to be with us for a while.

There are a number of things I think we can do to deal with this situation. For starters, politicians at all levels should lower the temperature of partisan rhetoric and bickering and encourage their followers and constituents to do the same. Media outlets and social media companies need to do more in monitoring and limiting the spread of disinformation, misinformation, and conspiracy theories. And finally, the public needs to exercise better judgment in its intake of information, learning how to distinguish between fact and fiction. Extremism is not likely to disappear even if we do all of this but if we don't it will become an even larger problem.



## V. COMMENTATORS' REMARKS

This section of the Report consists of presentations made by the commentators at the 21ST Annual Ambassadors' Forum: "Combating Terrorism Amid Covid-19: Review Of 2020 And Outlook For 2021 And Beyond" that was held on February 25th, 2021 via Zoom conferencing. Some updates and revisions were made by the invited participants.

### **PROFESSOR NATIVIDAD CARPINTERO-SANTAMARÍA**

*Professor at the Polytechnic University of Madrid (UPM) and General Secretary of the Instituto de Fusión Nuclear "Guillermo Velarde"*

I have prepared a small presentation covering new paradigms in nuclear security threats during the 21st century. As former Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs Guy Roberts and some of the other speakers have already mentioned, the present nuclear perils require new paradigms in nuclear security. First of all, it is very important to enhance radiological security culture in our society. The more prepared a society is to face a challenge, the better off it would be to solve part, if not all, of the challenge. We also have to take into consideration technological advances and insider threats which have been a focus of attention over the last several years, due to the ease of use of new technologies to transmit information.

I would like to mention illicit trafficking and vulnerabilities related to the secure control of radioactive and nuclear (RN) materials, as well as cyber threats, artificial intelligence, and the role of multinational networks that are of paramount importance for security. Under my point of view, counteracting measures to combat these threats should include the transmission of responsible knowledge to society on radiological issues and to prepare a good and proactive communication policy on those institutional websites responsible for radiation protection and radiological emergencies.

Information on how minimizing the effects of radiation, dirty bombs, or the use of panic as a weapon must be included. There is a special concern with respect to the illicit acquisition of nuclear and radiological materials or agents. Due to the fact that they involve dual technology, cover acquisition of RN materials could be produced by applying a series of strategic techniques that are becoming increasingly sophisticated. Combating illicit trafficking of radioactive or nuclear materials is an arduous task due to the opacity of these operations, indirect transmissions, diversification of suppliers, etc. The development of new technologies for transport and communication of goods in cyberspace not only substantially facilitates the flow of illegal trade, but also enhances security for traffickers. In some ways, we can also apply these concerns to biological and chemical agent smuggling.

When talking criminologically, we see that RN illegal trafficking may occur under different conditions. 1) Traffickers will falsify the end user. 2) Traffickers will diversify the concept for which RN materials will be used. Since we are dealing with dual use materials, it becomes easier for their illicit transport. 3) RN materials trafficking may occur by transporting them through countries where there is not a strong demand for export control. We know that there are countries with very porous frontiers or lacking solid regulations for import-export items.

According to the IAEA Incident Trafficking Data Base (ITDB) Factsheet 2020, 3,686 incidents occurred in 2019. They were reported by 139 party members. The information included in the ITDB is divided into three groups. Group 1 refers to trafficking or malicious use; Group 2 refers to undetermined intents, and Group 3 are incidents not connected with malicious use. Incidents related to malicious use were significantly high in the middle of the 2000s. Although these incidents for malicious use have decreased in the last years, the amount is still high. Most of the radioisotopes involved were those used in mining, construction industry, and hospitals (Iridium 192, Cesium-137 and Americium-241). It is a sensitive problem under health-social and law enforcement points of view. To counteract this trafficking, the IAEA has launched different applications and programs. One of the last being the Mobile Application Tool for Radiation Alarm and Commodity Evaluation (TRACE) for a Front Line Officer Network working at customs and frontiers. This tool is helpful to evaluate whether the alarm is due to smuggled material, warranting further inspection, thus avoiding false positives such as those produced by NORMs (Normally Occurring Radioactive Materials).

General features of radioactive and nuclear materials smuggling are basically high economic estimation of the product. Indeed, smugglers might think that this material will have a big price in the black market. Another feature is that, usually, it is a supply-driven commodity. In other cases, smuggling is just for commercial purposes; to sell the shielding metals of the radioactive source. In other cases, the reasons have not been clearly identified. The radioactive black market is an unstable market and it is totally compatible with other kinds of smuggling.

Risk assessments should include threats, vulnerabilities, and the likely impact of an event if it occurs. I would like to emphasize the words of the late Director General of the IAEA, Dr Yukiya Amano: "The fact that there has never been a major terrorist attack involving nuclear or radioactive material should not blind us to the severity of the threat."

**DR. MILTON HOENIG**

*Physicist and Consultant (Focus on WMD)*

They call it a Mexican Standoff. That is: between the US and Iran. Each side says the other must take the first step toward returning to the provisions of the JCPOA or Joint Comprehensive Plan of Action, the 2015 nuclear agreement between Iran and the P5+1 countries, including the United States, China, and four European nations, to prevent Iran from making nuclear weapons. The deal puts limits on Iran's enriched uranium stockpile and centrifuge enrichment technology for 15 years. By then, International Atomic Energy Agency (IAEA) inspectors are to gain permanent access to all of Iran's nuclear facilities to ascertain they are only for civilian use.

**TRUMP WITHDRAWS U.S. FROM JCPOA**

But in May 2018 the Trump Administration withdrew the US from the nuclear agreement and imposed crippling sanctions on Iran in a campaign of "maximum pressure" that has impacted the Iranian economy. In response, Iran has violated the JCPOA in many ways, particularly by increasing its stockpile of low-enriched uranium gas eightfold. Thus, at the present time, Iran can further enrich its stockpile to enough weapons-grade uranium for a bomb in about 3 months rather than taking a year. But, according to a recent report of Israeli military intelligence, it would take 2 years for Iran to fabricate a nuclear weapon.

Perhaps the U.S. has been in secret negotiations with Iran on returning to the JCPOA. Negotiators of the 2015 deal during the Obama presidency, including John Kerry, Wendy Sherman, William Burns, Colin Kahl and Robert Malley, are now in the Biden government, and Massey has been named envoy to Iran.

**WHO RETURNS FIRST, IRAN OR THE U.S.**

On Sunday, February 21, Iran announced that it would give the US and Europe a three-month window for a new diplomatic effort to restore the 2015 nuclear agreement. Iran then said that starting on February 23 and for the rest of this period or until sanctions relief is granted, it would stop implementation of the Additional Protocol to its comprehensive safeguards agreement, which allows the IAEA to make snap inspections at undeclared nuclear sites. Iran would also halt real time monitoring of its uranium enrichment but hold the data over the three-month period and release it if sanctions are removed. Subsequently Iran rejected the EU's request for informal talks with the U.S. and European countries on salvaging the nuclear deal.

Who takes the lead? A move back into the nuclear deal can be done simultaneously. That is the easy part. Iran would want the US to drop the debilitating sanctions imposed by Trump immediately; Biden may wish to do that gradually. President Biden looks to the future

Ultimately, President Biden will want to broaden the scope of the program beyond the current nuclear deal. This must be worked out with Iran and other countries, something that is not certain at this time. An important factor is the outcome of Iran's June presidential election.

Secretary of State Antony Blinken, in his January Senate confirmation hearing, clearly stated the intention of the Biden Administration to first consult with its allies, including Israel and Gulf states, before embarking on negotiating such a longer and stronger new agreement.

Perhaps it might include putting long term limits on Iran's uranium enrichment and fuel reprocessing, even like the 'gold standard' adopted by the United Arab Emirates for its civilian nuclear power program that completely disavows in-country enrichment and fuel reprocessing.

Biden wants a long-term agreement among a wide range of partners that places emphasis on regional security and stability. It would assure that Iran never acquires a nuclear weapon. It would limit Iran's terrorist proxies, particularly Hezbollah, and restrict Iran's ballistic missile program. But negotiating a new agreement would give Iran a new regional role. Maybe then the environment will be conducive to pursuing a Middle East weapons-of-mass-destruction-free-zone. The question is how to talk Iran into joining this whole endeavor.

**AMBASSADOR PJER SIMUNOVIC**  
*Embassy of Croatia to the United States*

In my intervention, what I would like to do, very briefly, as succinctly as possible, is to try to summarize what has been said, while also developing a short commentary from my part, along three main areas of topics, three main clusters.

The first one being stocktaking when it comes to the pandemic, taking a short look into where we estimate we are. The second one would be observing the main threats horizon, what in a foreseeable future may be possibly or likely coming our way. The third cluster I wish to address consists of preliminary lessons-learned; of trying to figure out what we have eventually learned from everything that has been happening, and to assess some of the main factors shaping our policies, plans and responses.

Starting with the stocktaking. Using the intelligence gradation of estimative probability, I would say that the most likely, highly likely scenario, pandemic-wise, is that we will be having it under control, gradually. That is what we have been seeing happening now, in the main, that is what we can realistically predict. There are and there still may be oscillations along the way, however, and rather likely so, with a lot of sacrifices and harm still. The vaccine has been introduced massively, generally at least in the developed world, and the highest likelihood for the foreseeable future would be that we will be gradually having it under control, enabling us to get back to a kind of normal as closely as possible; not getting rid of the virus entirely but learning how to limit the spread and the impact of the contagion, learning how to manage it, live with it. Ensuring that it does not have such a grievous, disruptive effect, such maleficent consequences on our life and on the overall human activity.

Having said that, I would add that it is necessary to issue a bit of a warning that it is also possible, quite conceivable, to face other, darker scenarios, scenarios in which we will be having ups but also some serious downs. We will have to deal with different strains of the virus, strains that will be more virulent, more resistant. We will have to deal with serious, hardly predictable societal pressures and tensions arising from lockdowns and limitations. This is indeed a possibility and I guess at this moment it is hard to say what the exact outcome will be. A prudent planning would necessitate preparing for any kind of contingency, but again, having said all that, I think that the most likely scenario remains the one of having it under control, to be able to get back gradually into a kind of normalcy. In its turn, as much as the global economy is concerned, as its main actors are concerned, the United States, Europe, the developed world, we are to all likelihood, as much as we can tell now, to experience a kind of 'V' shaped recovery. In some instances, it may be steep, in other instances, it may be less steep, but a general economic forecast, in getting out of the pandemic, ultimately may not be that gloomy after all.

Now, having all this in mind, the second topic I would like to address is the shape of the main threats horizon. I would say it is very likely, and very much, about terrorism, coming in different shapes and forms. The terrorism threat has remained clear and present, while it may have been overshadowed by the larger global threat, which was the pandemic, and it has been overshadowed presently by something else - which has been existing before, but it has certainly been reinforced, exacerbated during the pandemic - and that is the return of interstate confrontation, notably of tensions between great powers.

We are back to a great powers game again, with the Western democracies facing challenges presented by Russia and China on a multiple levels, in a sense that it is much more present than it had been the case during a preceding period, let's say a decade or two decades ago, with everything it entails for the policy and defense plans, for the type of military technology we are fielding, acquiring and developing, for the type of intelligence capabilities we are employing and developing, activities we are pursuing, policy; security, defense and deterrent postures we are assuming, all stemming indeed from a simply nonpareil magnitude of threats arising from the great powers rivalry and from a devastating potential of their armed conflict.

Meanwhile, the root causes, drivers and effects of terrorism have not gone away, they have remained there all the time. Despite the fact that in a territorial sense at least Daesh (ISIL, ISIS) has been very much defeated, Al-Qaeda is back alive and kicking, together with the whole ideology of extreme, violent Islamic fundamentalism. We do not really know, while we have all the good reason to be worried, what will be happening in Afghanistan, with the agreement with Taliban, the fundamentalist movement playing its game, biding its time against the central Government in Kabul and the US-led Western forces. An exit strategy from Afghanistan should not leave the county to its own chaotic devices, nor should it to any extent abandon the country to become a dangerous safe haven for terrorists again.

On top of the threat of terrorism motivated by a religious extremism, we have been seeing a resurgence of a threat of domestic, politically motivated extremism, actually and potentially capable of spilling over into unrest, violence and terrorism, presenting a very serious security matter of concern.

The interstate, great powers confrontation, as well as various sorts of extremism and terrorism - the main and constantly evolving national and international security threats we are facing - evolve together with a trend of new technologies, their force multipliers, notably information technologies, digital applications, Internet-based. The threat is materialized by the use of new, highly sophisticated instruments, when it comes to intelligence gathering, denial and disruption, spreading ideology and disinformation, gaining and coordinating supporters and followers, exploiting vulnerabilities inherent to a global reliance on these technologies.

The mentioning of vulnerabilities brings me to the final cluster, encompassing the consequences, effects, and the adequate lessons-learned from the pandemic, from the confluence of the preexisting trends and trends exposed and magnified by the pandemic.

The pandemic has been, as it still is, a most severe 'stress test' for the scientific community, for the national security community, for the individual nation states, their societies, administrations and economies, for the international organizations. Some actors responded better than others, some ended up brutally exposed. In any event, a series of major vulnerabilities have been revealed, notably including those related to the production, manufacturing and supply chains of vitally important, strategic supplies - we have to have them in place more reliable, credible and sustainable. Not only going national, but securing them among friends, among trusted allies, sharing the same values and interests, interconnectedness and interdependence. There has certainly been a shift towards the 'strategic autonomy', as formulated by the European Union - not self-sufficiency. This is applicable to the United States and to many other Western countries.

What also ended up exposed so much by the pandemic, is how vulnerable we are to the actions of Mother Nature, stemming in this case also from our own intrusions into the wild, our playing tricks with Mother Nature and Mother Nature responding in kind. That certainly sharpens the threat of other human actions upon the nature. Climate change is certainly on top of the list. Also, as mentioned by the previous speakers, we have experienced how much we are exposed and open to biohazards, the present pandemic being one of them. We simply must assume, we have to start from that assumption, that such a vulnerability has injected a set of dangerous inspirations, a set of malevolent ideas to the malevolent actors, to terrorists, 'lone wolves' or organizations, to hostile states, in terms of how to do damage next. So one of the lessons-learned that I think needs to be taken deadly seriously is the deadliness of the biohazard threat, in this case not developed and employed by the workings of the Mother Nature, but by the human agents.

Finally, this whole pandemic 'stress test' has put a pressure on many fundamental things we have been taking for granted, such as the reason, logic, science, scientific thought, liberal democracy, tolerance, bringing to the surface the trends of social and political radicalization, hatred, abandonment of reason, spurred by a widespread manipulation and distortion of information, wild conspiracy theories, spilling over from the virtual into the material world - massively enabled by the powerful vehicle of Internet, of the social media in particular.

This has happened even to such an extent, as a global trend, that it may lead to questions whether we are facing a trend of giving up the tradition of Enlightenment, while reverting back to some kind of the Dark Ages, to the irrational, ushering a sort of new 'age of unreason', at least when it comes to the world of ideas.

The crucial and to all likelihood enduring challenge in this regard seems to be how to deal with the hostile, potentially or actually out rightly dangerous flow of ideas and information on the Internet; how to strike a delicate balance between the freedom - the individual freedom, the freedom of expression - and the necessity of the state and the society to make sure that somebody's idea of freedom does not infringe upon the freedom of others, which is the essence of democracy and of a functioning and equitable community.

I hope that I have been able to provide a certain summary of what has been discussed, while sharing with you some of my thoughts, analysis and impressions.

## **VI. QUESTIONS, ANSWERS, DISCUSSION**

Selected comments by the contributors to this report during the discussion following the presentations. Some of the invited attendees from the United States and internationally participated during this segment.

### **DR. JENNIFER BUSS**

One thing that I want to address is how the threat environment is changing, meaning- we need to have new approaches on how we handle these threats. This is something that we've had to reevaluate every decade, and now we're to a point that we need to reevaluate even faster. New, never-before-seen technologies are disrupting the way society operates quicker than they used to. We are seeing that through a lot of information or ever-growing disinformation campaigns. People can spread news faster through self-reporting on social media platforms. Social media has hindered anybody's ability to fact check like we used to. The new threats of internet infrastructure and supply chain were totally disrupted during the pandemic. There is and has been a looming threat of not having internet while everybody's been working from home. The energy grid and other conditions are totally reliant on the internet, and if that all went down at the same time, we'd be in a totally different position than we are today. Something else on the horizon we need to be prepared for are terror attacks by way of an incoming flux of biotech and medical threats towards precision medicine. We need to be prepared, or at least be thinking about all of the issues that address the way that people are cared for and the way technology is developing and tailored to an individual. It's very possible this pandemic caught us a little bit off guard. I know Yonah is going to put out a great report based on your comments today.

### **PROFESSOR ROBERT TURNER, SJD**

This has been an excellent program. I don't have any particular questions. I've learned a great deal. It has been exactly what I expect from a conference put on by Yonah—and I'm sure I will have questions as I think more about it. But right now none come to mind. I just found it a fascinating event.

### **PROFESSOR RITA COLWELL**

I very much enjoyed the discussion of these important topics and being brought up to speed for a variety of disciplines and directions. A splendid session. Thank you, Yonah.

### **HON. RICHARD PROSEN**

I would just say that I welcomed the very rich discussion on a set of timely topics, and I really appreciated the chance to interact with everyone on the panel and the speakers. I look forward to engaging in future events.

### **HON. GUY ROBERTS**

Well I just want to echo what Richard said. Thank you very much, Yonah, for putting this on and it's great to see all the other presenters and speakers. I guess to quote one of President Obama's advisers, "we shouldn't let a calamity go to waste." The pandemic I think opens a door to doing some really good things to help develop a good response defense capability against these kinds of threats and I hope we take advantage of it. I know how difficult it was in the past and there was a bipartisan lack of interest in doing the things that need to be done and now I hope that we have a bipartisan support for doing the things that we need to do. I think we have furthered the conversation here so thanks again.

### **AMB. CHARLES RAY**

Thanks for including me Yonah, you know in the past that we've had these sessions and I've talked about the role of diplomacy and international cooperation in addressing these and I think that this past year with the Covid pandemic and now tying the impact the pandemic has had on global terrorism in the past and in the future, it further reinforces the need for a global cooperative effort to not only address these problems as they occur but to try and identify them and put measures in place to prevent them as much as possible. I would hope that as this report gets out, that it gets out widely to those people who are responsible for creating such conditions and that we do a much better job of international cooperation than we've done this past year.

### **PROFESSOR NATIVIDAD CARPINTERO-SANTAMARÍA**

Thank you very much to all of you for your attention and again, Professor Yonah Alexander, thank you very much for your kind invitation to this very interesting Forum.

## **DR. MILTON HOENIG**

I think that one point we haven't talked too much about today is the large importance of cyber, of big data, and of artificial intelligence. Cyber-attacks are just growing in a fantastic way and will influence every aspect of our society. A cyber-attack maybe included perhaps as a weapon of mass destruction as it takes over in war.

## **PROFESSOR ROBERT TURNER, SJD**

I am profoundly saddened by the intense political partisanship that has infected and divided America. The day after Jimmy Carter won the election as president in 1976, I wrote a memo to Senator Bob Griffin, my boss at the time, and I essentially said: "You didn't vote for him and I didn't vote for him but he's the only president we're going to have for the next four years. We need to set aside the partisanship that has divided our country so badly." Senator Griffin was believed to be in line to be the Minority Leader of the Senate. He was the Assistant Minority Leader, retiring Minority Leader Hough Scott had endorsed him, and there were no other announced candidates. It didn't happen. Howard Baker ran a covert campaign and won by a single vote. So, my recommendation that Senator Griffin reach out to President Carter when Congress reconvened in an attempt to restore bipartisanship was overtaken by events. But I felt it was the right thing to do, and I proudly displayed that framed memo on my office wall for the next four decades.

I strongly believe that, particularly in the field of foreign affairs, we have to set aside partisanship. I've watched things deteriorate as I worked in the Senate in the 1970s and later when I was the acting Assistant Secretary of State for Legislative Affairs in 1984-1985. Sadly, I've never seen the Nation as divided as it is today. We've lost almost all of the moderates in Congress.

I've commented more than once that if we had Bin Laden on one hill and the head of the opposition American political party on another hill and a congressman only had one round and a sniper rifle, they probably wouldn't fire because they couldn't decide who they wanted to kill the most. It is very sad.

We must bring our country together. I used to keep two TV's on in my home—one on Fox News and one on CNN, thinking I'd get different perspectives. But I've gotten to the point where I can barely bear watching either because they're so partisan these days. I don't know the answer, but something must be done to bring our people together.

Part of the answer is putting our country ahead of our party. Senator Arthur Vandenberg, of Michigan, who chaired the Foreign Relations Committee, argued in a February 1949 speech in Detroit that: "Nothing has happened to allow either Republicans or Democrats to put their party ahead of their country and those who do will serve neither themselves nor their parties." We need to get back to that tradition of bipartisanship.

I keep hearing some people want to "retrain" Trump supporters. It reminds me of the thought reform of the Leninists decades ago, where they would set up "reeducation camps" where class enemies would be sent so they wouldn't spread viewpoints contrary to those of the ruling elites. Some of our social media companies are silencing people because they think their views are wrong.

I taught at the University of Virginia for more than three decades—not including my time there as a student. UVA founder Thomas Jefferson, in a December 1820 letter to William Roscoe, declared: "This institution will be open to all points of view. For here we are not afraid to tolerate error, so long as reason is left free to combat it." That to me ought to be the guiding principle of intellectual inquiry. We ought to allow people who have ideas we believe are mistaken to argue them—even racist ideas—because we are going to educate them better through dialogue than through suppression by driving them underground.

There are a number of issues that I've worked on over the decades about which many today are confident I am factually mistaken and thus might properly be silenced so others are not misled. I still think the Vietnam War was a necessary war and I can't find anyone on the left willing to debate that. I still think Thomas Jefferson ought to be one of America's heroes. His actions on race and slavery were incredible in his era. When they wrote the 13th Amendment outlawing slavery at the end of the Civil War, its authors chose language that Jefferson had drafted 70 years earlier trying to prohibit slavery in the Northwest Territories to honor his long struggle against slavery. In the Declaration of Independence, Jefferson denounced King George for imposing slavery upon the colonies. That language was stricken because South Carolina and Georgia threatened to walk out of the convention. Jefferson had an incredibly enlightened view for his time (but certainly not by today's standards), but I keep seeing ignorant people want to tear down Jefferson statues and remove his name from schools across the country.

My sense is many people today do not understand who Jefferson was and what he did in so many different areas. If we allow people to suppress the idea that he was a decent person who we ought to take pride in, I think we hurt our country –and I would say the same thing if somebody wanted to speak ill about the writings of Lenin, Malcolm X, or any of a number of other unpopular people. To me, the solution is more dialogue and the opportunity to enlighten people through the exchange of ideas rather than suppression. Sadly, I sense there is a growing movement toward suppressing ideas that we don't like.

Programs like this, where diverse experts from around the world are left free to express their honestly held views, are the best way to search for the truth. I commend Yonah and all involved for making it happen.

## VII. ABOUT THE EDITORS

**PROFESSOR YONAH ALEXANDER** is the Director of the International Center for Terrorism Studies (at the Potomac Institute for Policy Studies) and the Inter-University Center for Legal Studies (at the International Law Institute). He is a former Professor and Director of Terrorism Studies at the State University of New York and the George Washington University. Professor Alexander also held academic appointments elsewhere such as American, Catholic, Chicago, Columbia, and Georgetown's Center for Strategic and International Studies (CSIS). He has published over 100 books and founded five international journals. His personal collections are housed at the Hoover Institution Library and Archives at Stanford University.

**PROFESSOR DON WALLACE, JR.**, Yale University BA, Harvard University, LLB, is a Professor of Law at Georgetown University as well as Chairman of the International Law Institute. He is a US delegate to UNCITRAL, vice president of the UNIDROIT Foundation, a member of the American Law Institute, and the former chairman of the International Law Section at the American Bar Association. He is also the author and co-author of several books and articles.

## VIII. ABOUT THE CONTRIBUTORS

**DR. JENNIFER BUSS** earned her B.S. in Biochemistry with a minor in Mathematics from the University of Delaware, and a Ph.D. in Biochemistry from the University of Maryland. She has served as Assistant Vice President, Vice President, then in 2018, was promoted to President of the Potomac Institute. Since joining the Institute as Senior Fellow in 2012, Dr. Buss has written and won numerous proposals, created several new centers and is in charge of all day-to-day business and operating functions of the Institute.

**PROFESSOR ROBERT TURNER, SJD** holds both professional and academic doctorates from the University of Virginia School of Law. He co-founded the Center for National Security Law with Professor John Norton Moore in April 1981 and has served as its associate director since then except for two periods of government service in the 1980s and during 1994-95, when he occupied the Charles H. Stockton Chair of International Law at the U.S. Naval War College in Newport, Rhode Island. A former Army captain and veteran of two tours in Vietnam, Turner served as a research associate and public affairs fellow at Stanford's Hoover Institution on War, Revolution and Peace. He has also served in the executive branch as a member of the Senior Executive Service, first in the Pentagon as special assistant to the undersecretary of defense for policy, then in the White House as counsel to the President's Intelligence Oversight Board, and at the State Department as principal deputy and then acting assistant secretary for legislative affairs. In 1986, he became the first president of the congressionally established United States Institute of Peace.

**PROFESSOR RITA COLWELL** is a pioneering microbiologist and the first woman to lead the National Science Foundation. She is a Distinguished University Professor at both the University of Maryland and Johns Hopkins University's Bloomberg School of Public Health and has received awards from the Emperor of Japan, the King of Sweden, the Prime Minister of Singapore, and the President of the United States. Her interests are focused on global infectious diseases, water issues, including safe drinking water for both the developed and developing world. She is a nationally recognized scientist and educator, and has authored or co-authored 16 books and more than 700 scientific publications. She produced the award-winning film, *Invisible Seas*, and has served on editorial boards of numerous scientific journals. She is the author of the highly acclaimed book *A Lab of One's Own* (Simon & Schuster).

**HON. RICHARD PROSEN** is the Deputy Director of the Office of Multilateral Affairs in the Bureau of Counterterrorism. During his time in the Bureau of Europe and Eurasian Affairs, Mr. Prosen covered transnational threats (including terrorism, cyber-attacks, cross-border illicit trafficking, organized crime, WMD proliferation, etc.), Central Asia/Afghanistan as well as NATO/OSCE resource-related (budget/personnel/finance) matters for the Office of European Security, Political, and Military Affairs (EUR/RPM). Prior to joining EUR/RPM, Mr. Prosen was posted to the U.S. Embassy in Bosnia and Herzegovina as the Political Officer responsible for all U.S. law enforcement engagement and assistance programs, helping Bosnian authorities build sustainable criminal justice institutions. Mr. Prosen also worked in the aerospace industry and served as an officer in the United States Air Force, helping design, integrate, launch, and operate the nation's most technologically sophisticated reconnaissance and missile defense satellite systems. He has an undergraduate degree in Aerospace Engineering (University of Notre Dame) and graduate degrees in International Security Affairs (Australia National University) and Business Administration (Loyola Marymount University).



**HON. GUY ROBERTS** joined the Department of Defense as the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (ASD(NCB)) on November 30, 2017. As the ASD(NCB), Mr. Roberts was the principal advisor to the Secretary of Defense, the Deputy Secretary of Defense, and the Under Secretary of Defense for Acquisition, Technology and Logistics. Prior to joining the Trump Administration, Mr. Roberts led a distinguished career in the United States Marine Corps as an infantry officer, judge advocate, and staff officer. He went on to serve as the Acting Deputy Assistant Secretary of Defense for Arms Control and Nonproliferation Policy for the Department of Defense, and then as the NATO Deputy Assistant Secretary General for Weapons of Mass Destruction Policy and Director for Nuclear Deterrence Policy before becoming an independent consultant and adjunct professor. Mr. Roberts earned a Bachelor's of Arts in Political Science from Arizona State University, a law degree from the University of Denver, and he holds masters' degrees in international and comparative law from Georgetown University, in international relations from the University of Southern California, and in strategic studies from the Naval War College where he graduated with highest distinction and won the Stephen B. Luce Award for academic achievement.

**U.S. AMBASSADOR [RET.] CHARLES RAY** served 30 years in the Foreign Service (from 1982 to 2012), after completing a 20-year career in the U.S. Army. His Foreign Service assignments were Guangzhou and Shenyang, China; Chiang Mai, Thailand; PM bureau/ DCM in Freetown, Sierra Leone; Consul General in Ho Chi Minh City, Vietnam; ambassador, Phnom Penh, Cambodia; Diplomat in residence, University of Houston; deputy assistant secretary of defense for POW/Missing Personnel; and ambassador, Zimbabwe. He has a B.S. from Benedictine College, Atchison, KS; an M.S. from the University of Southern California; and an M.S. the National War College. He's also a graduate of the U.S. Army Command and General Staff College, the Army War College's Land Forces Commander Course, and the Defense Intelligence School's Postgraduate Intelligence Course.

## **IX. ABOUT THE COMMENTATORS**

**PROFESSOR NATIVIDAD CARPINTERO-SANTAMARIA** is a Professor of Energy Security at the Universidad Politécnica de Madrid (UPM) (Polytechnic University of Madrid); Department of Energy Engineering at the Escuela Técnica Superior de Ingenieros Industriales (ETSII) (Industrial Engineering College) / Universidad Politécnica de Madrid (UPM) (Spain). 2) General Secretary of the Instituto de Fusión Nuclear «Guillermo Velarde» (IFN GV) ETSII –UPM. 3) Member of the European Academy of Sciences (EURASC). 4) Member of the Commission for Energy and its Relationship with Security and Defense of the Center for National Defense Studies (CESEDEN). She has lectured and presented papers in several conferences around the world: Armenia, Australia, European Union, Middle East, Japan, Latin America, Russian Federation and the United States of America. Education: PhD Universidad Complutense de Madrid (UCM). 2) University Expert in Energy Markets. 3) Diploma in High Studies of Defense by the Centre for National Defense Studies (CESEDEN). 4) Diploma University Expert in Transnational Organized Crime and Security.

**DR. MILTON HOENIG** is a nuclear physicist living in Washington, DC. He holds a PhD from Cornell University and was a Professor of Physics at the University of Massachusetts at North Dartmouth. On coming to Washington, he was on the staff of the U.S. Arms Control and Disarmament Agency. Subsequently, he was a consultant to the Natural Resources Defense Council (NRDC), and he then served a Scientific Director of the Nuclear Control Institute. Milton has consulted to the U.S. Department of Energy, the Philadelphia law firm of Berger and Montague, PC, and the Institute for Environmental and Energy Research. He is a principal in Consulting in the Public Interest of Lambertville, NJ. His books include co-author of vols. 1-3 of NRDC's Nuclear Weapons Databook, co-editor of Superterrorism: Biological, Chemical and Nuclear, and co-author of The New Iranian Leadership: Ahmadinejad, Terrorism, Nuclear Ambition, and the Middle East.

**CROATIA AMBASSADOR TO THE U.S. PJER SIMUNOVIC** has been Croatia's Ambassador to the United States since September 2017. Croatia is currently holding the presidency of the Council of the European Union. Before assuming his Ambassadorship, together with a career in international affairs journalism and academic research he served in various high-level positions in the Croatian Government, in the fields of national security, defense and diplomacy. He was Director of the Office of the National Security Council, Ambassador to Israel, Defense State Secretary in charge of defense policy, National Coordinator for NATO and Assistant Foreign Minister, heading Division for International Organizations and Security, Political Counselor at the Embassy in Paris, and Deputy Director of Analytical Department in the Foreign Ministry. During his career in journalism, he worked with the BBC World Service in London, with the magazine *Europ* in Paris, and with the Croatian daily 'Večernji list' in Zagreb, covering the collapse of Communism, crisis and war in the former Yugoslavia, and European and Transatlantic affairs.

