



White Paper: The Four Horsemen of Apocalypse Are on the Way 'Hunger', 'Pestilence', 'War', 'Death'

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Summary

The *Four Horsemen of Apocalypse: Hunger (1.1 billion people), pestilence (Corona virus), war (Putin's war), and unnatural death* are on the way across the globe, and unfortunately at the same time. It has been thought, above all in Western countries, that these Four Horsemen would never appear again, neither now nor in the future. Nevertheless, they are bringing destruction, heartache, disease, suffering, and death to many millions of people. While this critical synopsis outlines the omission, deception, self-deception, weakness, and unpreparedness among western societies, it also draws attention to a range of measures that aim to successfully counteract and eliminate the Four Horsemen. Positive examples based on creativity, commitment, confidence, determination, and courage are given, which indicate how a decent and dignified life in health, peace and freedom may be facilitated. Everyone is invited to make their own contribution. For, only with the participation of all will there be a positive future for all people living on our marvellous planet. Apocalypse: No!

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Analysis

1 | Horseman No. 1: Hunger

The Global Challenge was outlined by the author annually over the foregoing twenty-five years (Kern, 1997, 2001, 2011, 2016, 2018). A lead paper entitled *Food Security at the Crossroads – A Wake up Call* (Kern, 2012a) was presented in 2012.

A brief retrospective survey of the last 150 years and the outlook for the next 60 years, compressed into a time frame of 30-year intervals, was submitted to provide an outline of the conditions, backgrounds and intentions as documented in Article 25 of the Universal Declaration of Human Rights. A wakeup call and action list was presented for the improvement of food security (availability, accessibility, affordability, acceptability) as quickly as possible and with the aim to implement Article 25 of the Human Rights Declaration.

The survey concluded with the following remarks: "Several future-oriented reports and recommendations for action have been drawn up since the publication of Agenda 21 in 1992. These remarks amount to an outline of the major goals to be achieved. Everything that needs to be done has essentially already been said, all excellently described. The most important thing, now more than ever, is to act immediately and more rapidly than in 1992, and in full knowledge that the roads to be taken will be arduous and difficult."

As J. W. von Goethe (1749-1832) once aptly remarked, "Thinking is easy, acting is difficult, and to put one's thoughts into action is the most difficult thing in the world."

"There has been enough thinking; it's now 2012 and time to act!" (Kern, 2012a), a sentiment no less valid in 2022.

Today, food security and hunger in 2022 is not only a global challenge, but a disaster – a very real, though not unavoidable catastrophe: A global failure of human mankind!

- Jean Ziegler, between 2000 and 2008 UN Special Rapporteur on the Right to Food, described the situation in 2015 with the drastic words: "*A child who dies of starvation is murdered child!*"

"The United Nations (UN) bureaucrats are world champion in creating complicated statistics, mathematical models, and several kilograms, though often in completely illegible reports and in the seven UN-languages. But when it comes to implementing specific measures to remedy the multiple tragedies afflicting the people of our planet, the UN remains mostly paralyzed."

- Berit Reiss-Andersen (Chair of the Norwegian Nobel Committee), 2020: "*Hunger is used as a weapon.*"

The Nobel Peace Prize 2020 was awarded to World Food Programme (WFP) "for its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict." In 2019, the WFP assisted almost 100 million people in 88 countries who are victims of acute food insecurity and hunger.

- Barth (11/2021) cited Germany's Development Minister, Gerd Müller, (2013-12/2021): "*Hunger is murder!*" – "*Day by day 15.000 children are dying from hunger!*"

The greatest challenges are the fight against the pandemic, climate protection and the creation of a world



without hunger. And here we have to do more and not less! - *Hunger is murder, because we have the technologies and the knowledge.*

In collaboration with international experts, Müller's ministry investigated how much money would be needed for every child throughout the globe to have enough to eat. The findings showed that with an additional \$US 40 billion a year, a world without hunger would be possible by 2030. As Müller says, "*Why do we not do it? Because the political courage is missing!*"

Global Malnutrition: Predictions and Reality, 1974-2020-2030-2060 (2022):

- Kern, Feb. 2007: "Many explain why the world will/could not reach the millennium target of halving hunger by 2015 as having to do with higher food prices"
- Kern, Feb. 2017: "Many explain why the world will/could not reach Zero Hunger by 2030 as having to do with the increase of conflicts and climate change issues"
- Kern, May 2020: "Many explain why the world will/could not reach Zero Hunger by 2030 as having to do with the corona pandemic"
- Kern, Oct. 2021: "Many explain why it is impossible to eliminate hunger in years to come as having to do with the fact politicians do not have the courage to eliminate hunger"
- Kern, Feb. 2022: "Due to the fact that Western democracies are not prepared to militarily counterattack Putin's misanthropic aggression in the Ukraine and in Europe, hunger and misery are set increase throughout the world!"

Please take an uncynical look at the keynote lectures held by Kern (2012b, 2017a): *Hidden Hunger versus Impertinent Intemperance: Some Dogs and Cats Feed Gourmet-Quality – and a Lot of People Eat Dirt – An Eye-Opener – Not a Vision.*

The CO₂-PawPrint of a dog in western countries, for example, is 30 times higher than the CO₂-FootPrint of a child living in Bangladesh (Kern, 2017a).

Some more food for thought (Kern, 2/2020):

- They who only think about the future and do not master the present, will have no future.
- Only they who think of the future and master the present will have a future!
- In short, *the future is now!*

Thus, the priority-setting of key global challenges must be changed and must include the following:

- Counteracting Putin's war,
- Tackling the COVID-19 pandemic,
- Eliminating hunger and poverty,
- Protecting the climate and the environment!

The support of politicians, agencies, organizations working in the field to combat hunger and poverty is essential for the public at large. Unfortunately, almost nobody is out on the street demonstrating for the elimination of hunger and poverty – we see many worldwide demonstrations against vaccination, against climate change, against fossil energy, against discrimination, etc., but almost nobody demonstrates against the elimination of world hunger and poverty. Most people are not concerned, look away and are hence, in their failure to provide assistance, complicit in the starvation of millions of people.



Furthermore, most people remain unconcerned, because they are insufficiently informed about the inhumane life of millions of people living on earth. The media must give urgent priority to this inhuman disaster so as to increase pressure on decisionmakers: The world will otherwise bear witness to increasing riots and people fighting for food and a better future. And the figures, as forecasted by Kern (1997), of 1.0-1.1 billion people suffering from hunger by 2025 will become the harsh reality.

Peace will be at risk in many regions of the world. Food security is a key prerequisite for peacekeeping! Wars trigger hunger and refugees (see Cribb, 2019). As a result of Putin's war in the Ukraine, food, feed and energy prices are currently increasing everywhere in the world, and place food security, food availability and food sovereignty under heavy fire.

However, by harnessing all available agricultural technologies and relevant resources the world will be able to feed all people living on earth by 2050. Cellular food, meat alternatives, and plant-based protein will contribute significantly to reaching this objective. For various reasons, Zero-Hunger will nevertheless become a reality by 2060, at the earliest.

Allow me to quote from Goethe's Faust –Tragedy (1749-1832):

Beggar.

[Sings.]

*Good gentlemen, and you, fair ladies,
With such red cheeks and handsome dress,
Think what my melancholy trade is,*

*And see and pity my distress!
Help the poor harper, sisters, brothers!*

Who loves to give, alone is gay.

This day, a holiday to others,

Make it for me a harvest day.

(Direct link to Horseman No. 3)

2 | Horseman No. 2: Pestilence / Epidemics. Pandemics – Ebola / COVID-19

Epidemics and Pandemics – The Invisible Enemies?

EBOLA

In May 2016, the author published a forty-page paper entitled *Global Epidemics, Pandemics, Terrorism: Risk Assessment and European Responses* (Kern, ISPSW, 5/2016). The paper analysed the European perspective on global risk dimensions, risk reservoirs, risk assessment, risk communication, risk responses and risk recommendations in future epidemics and pandemics resulting from biohazards. The Ebola virus pandemic in Western African countries was used as an example and was the subject of a detailed assessment.



- **Risk is a Daily Reality where Current or Imminent Epidemics or Pandemics are Concerned**

Here, the key question is very simple: What form will the next epidemic or pandemic take, where and when will it occur, and who will be involved? In time, the further questions will have to be answered: How can risks be assessed, how can outbreaks of infectious diseases and plagues be avoided, how can efficient and effective management tools be prepared, and how can outbreaks of epidemics or pandemics be tackled as quickly as possible (and by whom)? And, finally, who will be in a position in the future to make robust decisions despite deep uncertainties?

- **Risk Responses: Ebola – Europe**

There is a difference between an earthquake and an epidemic. An earthquake comes suddenly and has an immediate effect. An epidemic is the exact opposite. It often comes insidiously, stealthily, and slowly. Long before the actual breakout, many epidemics have already cost the lives of the weakest and most vulnerable.

To quote a blog by Drewry, in May 2015 on the occasion of the Global Health Portal at Northwestern University: "In the case of the most recent Ebola outbreak in 2014, the twenty-first known outbreak of the disease, the world 'ignored prior outbreaks, warnings of the environment, and the increased probability of outbreaks', says Garrett. The world had no diagnostic tools, no surveillance, no vaccine, and no known treatment, leaving medical workers and communities horribly underprepared for the outbreak. In fact, from the very beginnings of the most recent strain, a lack of communication between the governments of Sierra Leone and Liberia, as well as delayed action by the WHO, created a precarious delay in response. This lapse in preparedness struck Garrett as a 'breakdown in solidarity and collaboration in global health.'"

- **Lessons from Ebola and Preparation for Future Epidemics / Pandemics**

"For months, the Ebola epidemic spread faster than the international community; the Center for Disease Control and Prevention (CDC) responded. Critical barriers in the affected countries include limited electronic connectivity; insufficient numbers of trained staff; inability to surge rapidly enough to provide needed case detection; education; contact tracing and isolation services; poorly functioning national health and public health systems with staff who often were unpaid, untrained, and poorly supervised. Surveillance and data management systems were overwhelmed." The above quote is a summary by CDC directors Frieden and Damon in November 2015 (2015)."

- **Risk Recommendations – Europe: Foresight Infectious Diseases**

It is impossible to know in advance when a pandemic will come or how severe it will be, nor can anything be said beforehand about the transmissibility of an infectious disease, or about its timing, nature, extent or seriousness. Unfortunately, information on past pandemics provides no guarantees for the future. Nevertheless, foresights or scenarios are necessary, since one option is to look into the future and future challenges in the field. Common sense tells us that global networks must be redesigned not only in terms of technical issues, but increasingly with a view to economic, political, social and military interdependencies (air and sea transport, climate change, environmental risks, social disparities, failure of national governance, interstate conflicts, large-scale migration, dual use of new emerging technologies, terrorism/bioterrorism). The global spread of epidemics can be assessed only generally, but the key to managing complex systems on the ground is a decentralized and rapidly acting organization. Predictions should be handled carefully by scientists, decision-makers, journalists, and the public at large.



- **Europe – US Cooperation – Asia Cooperation**

Furthermore, Europe cannot go on depending on the US security blanket indefinitely, but will have to implement capacity-building activities and provide sufficient capabilities to tackle pandemics and terrorism in order to safeguard human life, living standards and sealines of communication (SLOC). NATO is the key alliance platform.

Nevertheless, this does not mean that troops alone should be used to stop an epidemic/pandemic or terrorists, since soldiers do not fight pathogens or terrorists. Soldiers can perform useful tasks during emergencies and fight against external hazards, but a militarizing of the public health or police sectors is not necessary. Effective and efficient public healthcare systems as well as police structures will be the cornerstones for avoiding and tackling vital threats. The implementation of the United Nations health-related Sustainable Development Goals (SDGs) will be the best way to tackle the global health challenges, especially epidemics/pandemics and terrorism.

The paper concluded with the following:

Dear colleagues, all scientific knowledge and work to avoid and to combat conclude by stating what is to be done to eradicate infectious diseases and plagues that lead to epidemics or pandemics has grown out of the painstaking research of generations.

There is no need to draw up a list of all eminent individuals, but I think this is the right time and place to thank all those scientists, companies, veterinary medics, medics, nurses, politicians, civilians, journalists policemen and soldiers from whom we received our basic knowledge, values, and support, and who have lost their lives in honouring them, and to give them a round of applause.

May I ask you all to stand? Thank you very much!

Let me conclude by quoting Saint-Exupéry in 1948: *“As for the future, your task is not to foresee, but to enable it”* (The Wisdom of the Sands, Saint-Exupéry, 1948). In other words, our tasks are to improve our existing operative platforms, to assess and handle relevant risks effectively in order to avoid and to manage emerging known and unknown infectious diseases, plagues and biohazards in time, and in order to have a better life on earth.

COVID-19

In May 2020, the author published a paper entitled *The Corona Pandemic – a Critical Analysis with Recommendations for the Military-strategic Level* (Kern, InfoBrief Heer, 6/200).

During the current coronavirus pandemic, some state presidents have declared we are in the midst of a war. This statement is wrong, both strategically, substantively, and rhetorically. We prioritize military deployment if and when we are at war. However, the German Armed Forces are neither technically equipped nor comprehensively trained for such a war. Moreover, anyone who views this challenge as a military battlefield is strategically and operationally wrong, and such a view reflects an inaccurate assessment of the situation at hand. Attempts to solve the problem solely by military means are inappropriate and are therefore completely absurd. Nevertheless, military-historical experience can teach us vital lessons about today's strategic and operational action in dealing with epidemics and pandemics. This knowledge must be taken into account and used. Epidemics and pandemics are invisible and often new; these are completely unknown adversaries for which societies must prepare in several ways – ways which include, but are by no means limited to the military.



- **Poor Risk Perception**

In 2012, a paper entitled *Report on Risk Analysis in Civil Protection 2012* was presented by the Ministry of the Interior in the German Bundestag. A risk analysis entitled *Pandemic due to Virus Modi-SARS* was modelled by the Robert Koch Institute with the cooperation of other federal authorities. The analysis provides a detailed description of the probable effects on key areas of our society. The scenario, which is certainly worth reading, gives a precise description of the current Coronavirus pandemic in Germany. Inevitably, the question arises as to why politics, business, and the media have not addressed these warnings or recommendations for protecting their citizens from pandemics with the necessary sustainability measures and implemented these suggestions consistently. Finding an appropriate answer to this question is a task left to the reader.

The following sentence summarizes the key points of the original text: Was it simply ignorance, resistance to advice, lack of insight, carelessness, irresponsibility, misjudgement of the danger and urgency, fear, wrong prioritization, or, for the politicians, did it seem unimportant, unnecessary, inconvenient, an unattractive topic, unsuitable for PR, simply too expensive, irrelevant for elections, inconvenient, untimely, simply inopportune, incommunicable and unreasonable for society to accept for the politicians?" May a similar question be asked of the media's failure to address the potential dangers and hazards? (Original text in Kern, 5/2020).

It seems evident, however, that even though this event was widely predicted, preference was given to more topical and supposedly more urgent issues. A cursory glance at the main topics in the media in recent years, including climate change, immigration, pensions, electromobility, and animal welfare, rather than epidemics or pandemics, confirms this.

Preventive and protective measures regarding the coronavirus pandemic were not in place or else wholly inadequate in many countries around the world, including Europe and especially the USA. It is a bitter truth that at the beginning of the corona pandemic, the management of this virus on the European level was catastrophic or non-existent in every respect.

In 2016, Kern (2016) had already made extensive recommendations on how to combat pandemics at the international and European or NATO level. Additional recommendations were advanced in the context of the Federal Republic of Germany and the German Armed Forces (see Table 2 in Kern, 6/2020).

What would happen if further military conflicts were to occur right now? Beyond the 'paper situation', what capacities do the German Armed Forces have to make a proper military contribution? What about their current and future military striking power? Which impact capacity would it have in the context of the ongoing corona pandemic or future pandemics? Hardly anyone will or wants to provide a comprehensive answer in the current corona crisis. Timely answers are a MUST and should not be ignored!

Finally, a quote from General Carl von Clausewitz's book *On War*: "...to apply one's own forces at the right time and in the right place". Would this still be relevant for us in our current situation? With respect to the pandemic, this recommendation may be expanded as follows: ... "be in the right place at the right time with selected, comprehensively equipped, and well-trained personnel; lead, coordinate all activities and synergize them through clear, consistent, and credible communications.

After the pandemic is over, things will not be the same for the military worldwide (Kern, 6/2020).

- **Successful Management by Vaccination Based on Science and Technology**



In May 2020 worldwide there were 3.7 million confirmed cases of COVID-19 and 258.000 deaths from COVID-19.

As of the beginning of 2022, there have so far been 298.915.721 confirmed cases of COVID-19, and 5.469.303 deaths worldwide from the coronavirus COVID-19 since the January 2020 outbreak. To date, a worldwide total of 9.126.987.353 doses of the vaccine have been administered (WHO, 1/2022).

A virus named COVID-19 has brought and continues to bring the world to its knees. The immune system of millions of people was/is not strong enough to tackle this virus. National restrictions, lockdowns and safety instructions were implemented in order to slow-mote the pandemic. Functioning and registered pharmaceuticals or vaccines to tackle the problem were unavailable on the market at the beginning 2021. On 6 January 2021, members of the Anglican church said the following prayer in Manchester Cathedral of, UK:

*Most Merciful God, we pray for our world
And for an end to the pandemic.
Bless all health care workers and our NHS,
Give strength and skill to all who tend
The sick and dying.
May all people know your peace and love
That leads to eternity in Jesus Christ our Lord,
Amen.*

At the same time, some people with special knowledge, a clear vision, and with relevant management skills, high perseverance and a considerable courage have developed and implemented the mRNA technology and have brought an anti-COVID-19 vaccine onto the market within a mere eleven months!

These mRNA-based vaccines have safeguarded the life of millions of people worldwide today and will continue to do so in future.

The world is very thankful to those who have developed and implemented the mRNA technology. The world is extraordinarily grateful to the company *BioNTech/Mainz/Germany*, to Özlem Türeci and Ugur Sahin and their interdisciplinary team of scientists, as well as to the company *Pfizer/USA*.

Türeci and Sahin will no doubt receive the Nobel-Prize for medicine and/or for economics for their extraordinary, excellent, and unique contribution to the world.

Their premiss is *to understand the dialogue of genes and to further develop it – to decipher, marvel at and understand nature's primary language, to add to it with a sense of responsibility and to make use of it in an ethically acceptable way* (Kern, 2004).

Overall, this testifies to an extraordinary successful demonstration of science and technology, specifically in the field of boosting the immune system, and in tackling the COVID-19 virus pandemic.

Meanwhile, there are worldwide eight COVID-19 vaccines listed by the WHO (WHO, 11/2021), including the new inactivated vaccine *Covaxin* from Bharat Company, India.

Furthermore, in October 2021 ZyCoV-D, the world's first DNA plasmid-based COVID-19 vaccine developed by the Zydus Cadila Company received approval in India. Global permission by WHO is still pending.



China has developed homegrown inactivated vaccines called *CoronaVac* (Sinovac Company), and *BBIBP-CorV* (Sinopharm Company). These vaccines are not mRNA based and are not very effective. In China, mRNA-based COVID-19 vaccines developed in western countries are not approved and thus not imported. Furthermore, the Chinese government is enforcing partial or total lockdowns (Zero-COVID strategy) with draconian restrictions affecting millions of people. Millions of people are unvaccinated or only partially protected against the COVID-19 virus. This allows large waves of infections and increases the potential of new mutants.

Nevertheless, the world continues to search for or is waiting for a vaccine, a *PAN-Coronavirus Vaccine*, which may provide broad protection against all SARS-CoV-2 variants, as well as other coronaviruses. It is clearly on the way.

In mid-December 2021, the Walter Reed Army Institute of Research (WRAIR), USA, published a Spike Ferritin Nanoparticle (SpFN) COVID-19 vaccine, which may provide broad protection against SARS-CoV-2 variants as well as other coronaviruses; clinical trials are ongoing.

One further option is currently under development. *Grow and Eat Your Own Vaccines?* was the title of a paper published by Bernstein (UC Riverside, University of California), in September 2021. Edible, plant-based mRNA vaccines are currently being developed. mRNA vaccines can be successfully delivered into a part of plant cells. By using nanoengineering, leaves of spinach or lettuce, for example, were covered with nano-formulated droplets of mRNA vaccines; thus, the chloroplasts are triggered to produce the vaccine within the leaves of the plants. The vision is to turn edible plants into mRNA vaccine factories. Edible vaccines and plant-based therapeutics can be grown in the field, in the back garden, through indoor farming (Diego-Martin et al., 2020), in underground farms, in containers, in vertical farms, in urban farms, in green houses, climate chambers or at your 'personal farm at home' (Kern, March 2022, in press). Edible vaccines would offer better choices, especially for low-income countries and rural areas.

Currently, the world is able to tackle this apocalyptic Horseman No. 2 by using the above-mentioned science and technology. We must express our deep thanks to all people working in the healthcare and social systems, those politicians involved, media, schools, the army, police, fire brigades and volunteers in overcoming this crisis.

Nevertheless, it is crystal clear that further COVID-19 mutations will arise in the future, and nobody knows at what rates of infection, pathogenicity, and mortality. The world is thus forced to work on solutions for overcoming the current pandemic and to be better prepared for future variants.

3 | Horseman No. 3: War and Refugees

"Putin's War of Aggression - The Visible Enemy!"

Putin's war of aggression, an invasion. This premeditated war is misanthropic, vile, abominable, brutal, barbaric, criminal, irresponsible, ruthless, murderous, and anti-humanity; it has no prospect of a viable outcome, and nothing to justify it; it flies in the face of human rights and international law; it is an attack on Ukraine's sovereignty; it is 'military rape', and its perpetrator has been exposed as a war criminal, responsible for genocide, one who has brought death, misery and destruction to the heart of Europe. These are some characteristics of Putin's war as described by members of the German Parliament on Sunday 27, 2022. Putin has closed himself



off from humanity; he is despised, ostracized, and will soon be held accountable within his own country and at the International Criminal Court in The Hague. Putin will doubtless opt for the cowardly way out and evade responsibility by swallowing a cyanide capsule.

Thursday, February 24, 2022. The world awakens to a turning of the times. It is no longer faced with 'cold war', but a 'hot war', for which the Ukraine is currently paying with its blood and human lives. We were naive, lazy, and politically insufficiently alert; we live life through rose-tinted glasses. We are an unprepared society, which lacks necessary military means; we have been subject to years of inaccurate estimates of political and military situations. Unilateral disarmament does not lead to more security. Freedom and life in peace have their price.

Permit me once again to quote from Goethe's Faust – Tragedy (1749-1832):

Another citizen.

*Sundays and holidays, I like, of all things, a good prattle
Of war and fighting, and the whole array,
When back in Turkey, far away,
The peoples give each other battle.
One stands before the window, drinks his glass,
And sees the ships with flags glide slowly down the river;
Comes home at night, when out of sight they pass,
And sings with joy, "Oh, peace forever!"*

Third citizen.

*So I say, neighbour! Let them have their way,
Crack skulls and in their crazy riot
Turn all things upside down they may,
But leave us here in peace and quiet.*

Conscience prompts the question as to whether it is alright to enjoy a glass of wine in the evening while you watch news images from Ukraine and the rest of the world.

- **Was this the Consequence of Another Lapse in Risk Judgement?**

Was it simply ignorance, resistance to advice, lack of insight, carelessness, irresponsibility, misjudgement of the danger and urgency, fear, wrong prioritization, or did it seem unimportant, unnecessary, inconvenient, unattractive topic, unsuitable for PR, simply too expensive, irrelevant for elections, inconvenient, untimely, simply inopportune, incommunicable, and unreasonable for society or politicians to accept? May we ask a similar question about the media's failure to address the potential dangers and hazards?

Catastrophes are not on the agenda, but foreseeable or predictable!

At the beginning of the COVID-19 pandemic in 2020, the situation was very unclear, complex, and information was very vague. The public at large was looking for reliable, validated and understandable information to cope with this new challenge. Fortunately, several scientists and professionals in the field of immunology, virology, epidemiology, medicine, or molecular biology did demonstrate great competence and explained very well what was happening and what should be done.



At the beginning of Putin's war in the Ukraine, Lieutenant General Mais declared the following: *"The Bundeswehr, the army, which I may lead, stands here clueless" – "We all saw it coming and were unable to draw and implement the right conclusions about the Crimean annexation." - "This does not feel good! I am very upset!"* (Rieke, February 24, 2022).

In fact, there is a broad spectrum of experts operating outside the German Army, namely, of retired officers, diplomats and advisers, politicians, journalists, representatives of thinktanks, or academicians, all expressing their opinions in the media, in interviews, by making statements, and by participating in talk shows, etc.

However, though first-hand professional information from top-ranking military level is rare, it is essential for the public at large. They should advance reliable crisis communication from their respective military standpoints. Whereas, the COVID-19 pandemic could be managed, to some extent by operating from one's *home office*, the ongoing war cannot, by any means, be stopped by sitting in a comfortable *home office*.

Evidently, despite this widely predicted catastrophe, preference was given to more topical and supposedly more urgent issues. The main topics in the media over the past year were, among others, the corona pandemic, climate change, inflation, rising energy prices, illegal immigration, electromobility, gender issues, animal protection, while there was no reportage on the emerging threat of war and on the need to strengthen German and Western democracies' military capability.

Much like the COVID-19 pandemic, where many scientists pointed out the dangers of a pandemic at an early stage (e.g., Robert Koch Institute, 2012), studies by competent scientists of military-strategy provided forewarning of the high potential of aggression and the dangers of war emanating from Putin. The core questions of an analysis focusing on Georgia or the Ukraine and Russia by retired Lieutenant General Olshausen (2009) and former President of the Clausewitz-Gesellschaft e.V., illustrate this well:

- It is to be noted that the Russians under Putin and Medvedev, and in that order, have shown that they are ready to intervene on a massive military scale in order to deny a country like Georgia, with a democratically elected government, the free choice to orient itself towards the West [by integrating] into the North Atlantic Alliance and the European Union. That is the real political purpose and the clear message sent to the Alliance and the European Union.
- Can and will the West verbally demand and also stand up for the sovereignty and territorial integrity of a democratic Georgia?
- Will the West be vigilant and act to ensure that Russian developments do not bring about undemocratic regime change?
- Will the West accept Georgia's and, if necessary, Ukraine's *de facto* political-military veto of a free choice for a policy of aspiring membership in the Alliance and the EU, or be ready to continue to actively support this aspiration and lead it to success?
- Will the West realize that this was merely the first step of a resurgent Russia and others towards their neighbouring countries and that, therefore, thanks to Western inactivity or powerlessness, the policy towards the states of the South Caucasus, Ukraine, but also from Moscow will strengthen and not force them towards the new (old) Russia in order to adapt to or even submit to Russian requirements?
- Will the West take action to show the Russians that the alliance's security is indivisible and its willingness and commitment to the collective defence of all political or military members must be taken seriously by Russia?



Furthermore, Olshausen published a short strategic analysis in March 2014 entitled *Der Konflikt in und um die Ukraine – Der VN Sicherheitsrat blockiert – EU und NATO gefragt* (The Conflict in and around the Ukraine – The UN Security Council Blocked – EU and NATO Requested). His description of Putin's intentions was crystal clear:

- Putin and Russia stick consistently to their version, namely, that the Kiev government is illegitimate, that right-wing nationalists and fascists threaten the Russian-speaking and ethnically Russian population with violent action, and that the Crimea must be protected against this by local security forces.
- The West condemns Moscow's offensive action in the Crimea, but has no influence on Putin's risk calculation. The U.S. and Europe rely on dialogue and sanctions, while Putin's purpose is to separate the Ukraine from the West.
- After the crisis prevention of Europe the USA and NATO failed repeatedly, and their previous crisis-management measures did not change or even weaken Putin's actions.
- The West condemns the violation of international law and goes back to *business as usual*. Putin will be encouraged to take further steps in eastern Ukraine.
- Declarations by the United Nations documenting the isolation of Russia have no impact at all. These bounce off Putin and he will pursue, undeterred, the restoration of Russian land and power.
- It appears that a president of a country that deploys determined military power, strategic propaganda, and a destabilising fifth column against another country with only diplomatic means, cannot be countered effectively.
- And, so far, all political measures and announced economic sanctions cannot stop the immediate Russian action in the Ukraine.

Putin relies on war as a political means to impose his will on others. He even threatens to use nuclear weapons and attacks nuclear power plants in the Ukraine. So far, he is not letting anything stop his war of aggression.

The Covid-19 virus can be lethal but has no will of its own. By contrast, Putin murders wilfully! Currently, countering this with strong military weapons is the last option.

Lutz Feldt (Vice Admiral ret. of the German Navy) outlined his position (8/2016) in the following:

- Depending on how you look at it, the world has gone haywire, or, more specifically, the attempt to set up new rules, which are no longer based solely on our standards, has begun: Whoever sets the standards will determine part of the future.
- It requires a certain amount of composure and, above all, knowledge, to at least maintain somewhat of an overview.

Reflecting this message, Kern (2/2017b) concluded his plenary lecture held at the Rotary Club Bad Neuenahr-Ahrweiler with the following: New rules ...

- ... must be worked out together with expertise and prudence.
- ... are essential for seeing important difficulties correctly.
- ... are necessary for seeking and providing points of orientation.
- ... are important for redefining new goals and meaningful objectives.
- ... for knowledge and conscientious commitment to reduce apocalyptic fears to counteract real



disasters at an early stage.

- ... are necessary for brave involvement, because generally applicable rules are increasingly being broken in many places.
- ... are necessary for deciding which rules are to be changed or broken; and when? Now!

Living in freedom and peace has its price and *defensive democracies* must be able to defend themselves. It is not about a militarisation of a democracy, about society's focus being placed solely on military needs. By no means: It is about equipping a democracy with military capabilities so that a society can act successfully at any time to prevent military violence, or to robustly defend itself militarily. That is the task of every citizen.

Thank goodness: Although somewhat belated, in an extraordinary historic meeting of the German Bundestag on 27 February 2022, Chancellor Scholz, in close consultation with his EU and NATO allies and several other nations, has turned the tide and is demonstrating leadership in these perilous times: It marks a drastic turning of the times. This will hopefully prove similar to the kind of leadership exemplified by the Ukrainian President Volodymyr Zelenskyy. For his protection, and as a symbol of solidarity, the Nobel Committee in Oslo should immediately award him with the Nobel Peace Prize for bravely defending the values and freedom of Ukraine, the EU, NATO, and the free world.

All measures announced by Germany, the EU, NATO, the USA, Canada, Japan, Australia, Switzerland, and many other nations are necessary, and must be implemented immediately. Hysterical thought and action are entirely out of place here.

The provision of funds, the supply of military defence equipment and social aid for the refugees are on the way. This is all very necessary and important. Nevertheless, freedom and democracy cannot be donated!

To date, the Western world has, as yet, been unable to bring itself to provide Ukraine with vital heavy weapons to defend itself against artillery, tanks, missiles, and fighter planes. Voices from social networks demand that the West should immediately destroy Putin's illegal troops on Ukraine's soil. It would not be an attack on Russia, but on foreign military units causing the suffering and destruction in the Ukraine. Unfortunately, without the full support of NATO, the U.S., and the free world, this is just mere wishful thinking.

Presumably, some future historians will document the following:

The West:

- did not put in place a powerful military/nuclear counter-deterrence against Putin's Russia
- suffered from a self-deterrence prompted by Putin's simple announcement to use nuclear weapons, if necessary
- had fears of World War III, and tried to prevent this by all means
- gave Putin a '*blank check*' by declaring not to send any military forces to support the Ukraine
- pleaded guilty for failing to provide direct military assistance
- showed *cowardice in face of the enemy*, and triggered by fears or anxieties, reacted significantly, or
- avoided World War III by acting prudently; and however harsh it may be to admit, the collateral damage resulting from Putin's bloody war in the Ukraine, though bitter, was necessary and unavoidable.



Should Putin continue his war of aggression like this, many people in the Ukraine will be slaughtered day by day. Unilateral disarmament (Ukraine's renunciation of nuclear weapons) did not lead to more security. It continues to be mercilessly abused by unscrupulous people. *Creating peace without weapons* works only if all nations and societies adhere to this requirement. Putin is not interested in peace and negotiated solutions. He sees military force and wars as the appropriate means for enforcing his policy (see von Clausewitz, 1835). The West will not be able to avoid preparing for war immediately in order to stop Putin's aggression. Consequently, a boosting of the defensive ability of German / European Army / NATO is essential to safeguard freedom and peace, now and in the future. At the end of 2021, Germany took place 103 in the Global Militarisation Index (GMI) 2021 from a total of 153 countries, while Russia occupied tenth place. In Western Europe, Germany occupies place fifteen from a total of eighteen, whereby only Austria, Luxemburg and Malta fall behind Germany (Bayer, BICC, 2022). With respect to the Global Gross Domestic Product (GDP) 2021, by contrast, Germany occupies fourth place.

Unfortunately, a *war of division / schism* has been raging between the Orthodox Churches in Russia and the Ukraine since 2019. The Orthodox Church of Ukraine includes the Ukrainian Orthodox Church (UOK) the Moscow Patriarchate, an autonomous church within the Russian Orthodox Church, and the independent Orthodox Church of Ukraine (OKU), which was recognized by the Patriarchate of Constantinople. Kirill, the Patriarch of the Russian Orthodox Church (ROK) has yet to distance himself from Putin's war of aggression, and he is not set to do so in the foreseeable future (Holm, 2022).

- **Food for Thought or a Private Lesson for Putin in the History of Russia**

In 1921 and 1922, almost one-hundred years ago to the day, a terrible famine occurred in the USSR. Droughts and economic upheavals aggravated this national catastrophe. Hunger was so severe that it was likely seed-grain was eaten rather than sown (Wikipedia, 2022). The most affected places were in the South-eastern regions of European Russia, including the Volga. An estimated sixteen million people may have been affected, and up to five million people died. At the time, the USSR received funding from the USA of up to approx. 78 million \$US. Over ten million people were fed daily, with the bulk of the food coming from the American Relief Administration. The USA provided more than 768 million tons of flour, grain, rice, beans, pork, milk, and sugar, which were at the time valued at over 98 million \$US (Bartlett, 1962).

Ninety years ago, 1932-1933, a terrible man-made famine called *Holdomor* (*holod* = hunger; *mor* = extermination) swept the Ukraine in (Applebaum, 2019). Joseph Stalin forbade anyone from leaving the Ukrainian republic in search for food. Despite growing starvation, food requisitions were increased, and aid was not provided in sufficient quantities. The number of Ukrainians who perished from starvation amounted to 3.9 million people. It was a terror-enforced famine, a *genocide* organized by Joseph Stalin, which Putin would dismiss as *fake news*.

Many years ago, the great Russian memoirist, Nadezhda Mandelshtam (1899-1980), wrote: "*Happy is the country in which the despicable will at least be despised.*"

Putin and his accomplices should have a look at photos documenting the misery caused by hunger in 1922 and his/their war, in 2022. They should go in person to see the many wounded, injured, maimed, mangled, and dead – men, women, and children as well as all the destruction for which they are responsible.

They should, furthermore, reflect on the following lines of French officer and poet, Alfred de Vigny (1797-1863),



written in 1835: “It is also desirable once and for all to set unalterable limits to those unconditional orders issued to the army by the supreme power of the state, a power which has so often in history fallen into dishonourable hands. It must never be possible for a few adventurers who have attained dictatorship to turn four hundred thousand men of honour into murderers by virtue of a law as short-lived as their rule.”

- **But Perhaps *Mother Nature* will Bring Putin to His Knees.**

Putin’s war machinery is currently stuck in the thick Ukrainian mud typical of the region’s black soil at this time of year. Soil may be a *natural defence* for the Ukrainian people. Soil is currently more valuable than gold!

The early *Rasputitia* may slow down the movement of Russian troops, especially key battle tanks or heavy military transport vehicles. However, this will not be enough to stop Putin’s war in the Ukraine. *Rasputitia* is the Russian term for two seasons of the year: thaw occurring in spring around the beginning to mid-March, and heavy rainfalls during autumn, when travelling becomes difficult in the country due to boggy ground and mud-conditions across the vast plains. *Rasputitia* means a period of *time without roads*, when it is very difficult to move, even on foot. Many Russian soldiers will become bogged down in Ukrainian soil and die unworthy deaths on Ukrainian ground.

Furthermore, information dating from the end of 2021 indicates that the harvest in Russia in that year was significantly lower than expected due to floods and droughts in some food-growing regions. Food prices have by far outstripped the stagnant incomes of Russia’s working population, and domestic consumers needed to tighten their belts by end of 2021. Presumably, the effects of El Ninia will have likewise contributed to bringing down the harvest in Russia in 2022. Food shortages and hunger will be making themselves felt in Russia, in the Ukraine and the rest of the world, especially in low-income countries.

Crop failures in Russia point to serious shortages of bread and potatoes ahead (Goble, September 21), and the *Situation with potato and sugar-beet seeds in Russia is catastrophic*, (Fresh Plaza, February 2022): this indicates the fragile food security and self-sufficiency levels within Russia itself. Perhaps, *mother nature* will show Putin his limits. Unfortunately, the Russian population, the people of the Ukraine and across the world will have to pay the inhuman price.

- **Key Questions, which Must be Answered as Quickly as Possible:**

Well-known, but long suppressed and unanswered questions now emerge:

- What should we do if the crisis continues to escalate?
- What happens if we are under an even greater threat?
- Are we prepared for such an existential crisis?
- Can we imagine or prepare for the possibility of Germany also having to take up arms?
- Do we have effective and efficient air defence on the battlefield as well as against drones and hypersonic missiles?
- Do we have appropriate operational warning facilities?
- Do we have adequate military protection for our key infrastructures such as airports, power plants, bridges, etc.?
- Do we have protective capabilities in place following nuclear strikes?



- Do we have adequate protective bunkers?
- Do we have sufficient reserves of blood bags?
- Do we have enough quantities of water and food supplies?
- Do we just have plans, or do we have competent crisis-management capabilities?
- Do we have comprehensively prepared strategies for a possible war of aggression?
- Do we have emergency advice for the population, like the brochure, issued in thirteen languages by the Swedish government in May 2018, entitled: *If Crisis or War Comes?* The Russian annexation of Crimea in 2014 and the growing threat and aggressiveness of Putin triggered this valuable precautionary measure for the Swedish population.

Many of these questions may unsettle the reader.

- Unsettle? Yes! These questions are a call to leave the *comfort zone*, to be prepared for the worse, to *think over* developments, to make up your own mind and to reflect on the developments from different angles and, finally, to act accordingly.
- Stir up fear? No! Although this tragedy is taking place in Ukraine, underplaying catastrophe must be rectified! Soon or later, Putin's rule will come to an end, thanks to global countermeasures; and he knows it! He has marginalized Russia itself and made it a pariah of the world. The accumulated billions in his funding of the war (\$US 630 billion), as well as the vast sums gobbled up by his war machine (2020: \$US 61.7 billion, 11.4 percent of government spending), could have been more usefully spent on improving living conditions in Russia. In the end, the Russian people will have to pay for it. Putin is murdering his own country.
- Encourage? Yes! Yes, we will eradicate world hunger! Yes, we can overcome the COVID-19 pandemic! Yes, we can, if we do the right thing and act bravely by defending peace and freedom!

In addition to countermeasures declared worldwide against Putin's war, it is above all else important to strengthen and sustainably develop common sense and morale when defending democracies that wish to live in peace and freedom in the future. Thus, democratic civil societies must strengthen their own *immune system* and to tackle fake news and propaganda by extensive education.

Every little sign of warning, every prayer, every toll of the bells, every song, every peace march, every peace concert, every demonstration in support of the Ukraine, makes the EU and the free world build another essential building block in personal defiance of Putin. You can only defend your country bravely if you are morally convinced of it beforehand, and at the risk of your own life in defence of the peace and freedom of the people.

Yes, we can – we can win against Putin and his clan by demonstrating the defence of our democracies and the free world!

Please, stand up and give a minute's thought to acknowledge those people now fighting for Freedom and Peace.

And, last but not least, please have a look at the two very encouraging clips from:

- Charlie Chaplin (1940): *Final Speech from the Great Dictator*

<https://www.youtube.com/watch?v=J7GY1Xg6X20>



- Udo Lindenberg (2018), Excerpt from video, *We're Going to Peace* ("Komm wir ziehen in den Frieden"), currently, highly relevant.

<https://www.youtube.com/watch?v=oeFwTPyhY8Y>

*Come, we're going to peace
We are more than you think
We are sleeping giants
But now we rise up

Those wars everywhere
Nobody can win there
What if they started a peace
And everybody, everybody came.*

4 | Horseman No. 4: Death

Allow me to quote the lyrics of the hip-hop band *Freundeskreis* from their 1999 album *Esperanto*:

*This earth is full of hunger and bread
this world is full of life and full of death
in poverty and wealth without limits
this earth is aflame with beauty
this world is completely burned from misery
but your future is glorious and great!*

And

- to live and die in dignity should be a human right!
- to die of hunger is never dignified!
- to die of a plague is never dignified!
- to die in war is mostly not dignified!

Dignity means acting ethically!

- **Further Food for Thought**

Prayer to mark United Nations Day 2013 of the United Nations Association Northern Ireland:

Prayer God of compassion, walk alongside all your global stewards who work to create a more just and peaceful world. Equip the United Nations community with a sense of urgency and humility that lets your will be done. Each day you give bread enough for all, grant us also the wisdom to ensure that everyone has enough. Teach the world's leaders to forgive, to extend welcome across borders. Show the world a new path beyond greed,



oppression, and division. We pray for a world united. We pray for the power to save succeeding generations from war. We pray for a glory that reaffirms the dignity and worth of every person. We pray that your grace might ensure life in larger freedom forever, for all your children. Amen.

A verse from Schalom Ben-Chorin (Peace Song of Freedom), Jerusalem 1942, to bring hope in times of crisis such as the present one:

*Almond trees, renewed in bloom,
do they not proclaim
life returning year by year,
love that will remain?
Almond blossom, sign of life
in the face of pain,
raises hope in people's hearts:
spring has come again.
War destroys a thousand-fold,
hatred scars the earth,
but the day when almonds bloom
is a time of birth.
Friends, give thanks for almond blooms
swaying in the wind:
token that the gift of life
triumphs in the end.*

- **A Take-Home Message:**

Allow me once again to quote J. W. von Goethe (1749-1832):

Knowing is not enough; we must apply. Willing is not enough; we must do.

Comment: Opinions expressed in this contribution are those of the author. The White Paper was first prepared for discussion before 5 March 2022.



About the Author of this Issue

Dr. Manfred Kern, biologist, futurologist, managing director of agriExcellence e.K. (www.agriexcellence.de), worked in the chemical crop protection industry for Hoechst AG, AgrEvo GmbH, Aventis CropScience AG and Bayer CropScience AG. Over the foregoing 40 years he has held key positions in science and technology, strategy, marketing and communications.

He has been running the project "Future of Agriculture: Vision 2025/2050", a comprehensive study on the safeguarding of world food supplies, since 1995. Dr. Kern has more than 170 publications to his credit and has given over 1,200 presentations at international/national congresses, conferences, symposia, and workshops in over 80 countries.

Since 2004 he is teaching as Senior Fellow at the Centre for Development Research (ZEF) at the Rheinische Friedrich-Wilhelm-University of Bonn/Germany. In 2020 he was acting as an expert participating in the evaluation of the HORIZON 2020 program of the European Commission. In 1999 Dr. Kern finished the "Kern-Seminar on Security Policy" of the Bundesakademie für Sicherheitspolitik (BAKS), (Federal Academy on Security Policy) of the Federal Republic of Germany (the supreme education course of Germany) in Maria Laach, Berlin, Vienna, Moscow and Washington. He was Lieutenant-Colonel (P.) (Res.) in the Euro-Corps, decorated with the silver medal of the German Bundeswehr.

He has been awarded by various organisations for significant accomplishments in the field of agricultural innovation. In 2007, the secretariat of UNCCD (United Nations Convention to Combat Desertification) recognized Dr. Kern by upholding his title as "*Eminent Person*".



Manfred Kern



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ISPSW No. 902, 2/2023 White Paper:

The Four Horsemen of Apocalypse Are on the Way 'Hunger', 'Pestilence', 'War', 'Death'

Dr. Manfred Kern

Supplement: A Picture Is Worth a Thousand Words!

For copyright reasons, only web links or references to relevant images expressing the themes addressed are given.

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