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**ВЛИЯНИЕ ЭПИДЕМИЙ НА ЭКОНОМИКУ. РОЛЬ ГОСУДАРСТВЕННО-
ЧАСТНОГО ПАРТНЁРСТВА НА ПРИМЕРЕ БОРЬБЫ С ВИРУСОМ ЭБОЛА.
ОПЫТ И ПЕРСПЕКТИВЫ**

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J. Chatterley:

Infectious diseases, such as Ebola, have a huge impact on the countries they affect. And they are increasing in frequency and in scale. We are going to talk about why this is happening and how to best tackle a response: what we have learned from the experiences of Ebola and how we can transfer that knowledge to combat other viruses, whether it is the Zika virus, or whether it is HIV and AIDS.

I am very pleased to say that we are joined by the President of Guinea in West Africa. Ebola was first identified in Guinea. I would like the President to start off by talking to us about the economic and social impact of Ebola and what effect it had on the country.

А. Конде:

Прежде всего мне хотелось бы поблагодарить организаторов за приглашение на Форум.

Конечно, вирус Эбола очень серьезно повлиял на ситуацию в нашей стране — не только в гуманитарном плане, поскольку погибли люди, но и в экономическом, потому что страна оказалась в изоляции. Однако благодаря усилиям Всемирной организации здравоохранения и различных стран, таких как Соединенные Штаты и Россия, мы смогли справиться с этим заболеванием с помощью необходимых вакцин.

Международное сообщество должно создать необходимые инструменты для борьбы с подобными заболеваниями и для помощи таким странам, как Гвинея и Либерия, пострадавшие от вируса Эбола. Благодаря международному сотрудничеству мы смогли справиться с этим заболеванием, но необходимо разрабатывать новые вакцины, чтобы помогать не только Гвинее, но и другим африканским государствам справляться с аналогичными заболеваниями.

Как политический руководитель, я, конечно, интересуюсь в первую очередь гуманитарными и экономическими последствиями. Полагаю, что другие

участники этой панели, например представители организации «Врачи без границ», смогут больше рассказать об этой проблеме.

Я хотел бы поблагодарить всех, кто помог нам справиться с заболеванием и координировал усилия на международном уровне, — в том числе Российскую Федерацию, которая разместила у нас соответствующую лабораторию, и другие страны. Вакцина, которую сейчас передает нам Россия, сыграет важную роль в победе над этим заболеванием.

J. Chatterley:

Thank you, Mr. President. I would like to introduce Dr. Bruce Aylward, who is the World Health Organization (WHO) Director-General's Special Representative for the Ebola Response. Dr. Aylward, the World Health Organization came under fierce criticism. We had the first case of Ebola in Guinea and we had a three-month time delay before we got a suggestion of a problem and a further number of months before a public crisis was announced. I do not want to push the criticism angle, but I do want to ask you about the response, about how we can reform here and how we can respond better in the future.

Dr. B. Aylward:

Thank you, Ms. Chatterley. Good afternoon, Your Excellency. We have learned a couple of very big lessons from these crises, that pertaining to WHO, of course, but also to the world on a broader scale. The first big lesson we learned was that the most potent threat to our way of life, to our economies, and to our populations are infectious hazards. That is the most unmanaged threat and unmanaged risk in the world. The crisis that fell on His Excellency's country cost USD 2 billion across that sub-region, in forgone economic cost. But SARS, another infectious disease that hit us just ten years ago, cost USD 30 billion. If we have a bad flu epidemic—not even a very bad flu epidemic—it is estimated that it is going to cost USD 3 trillion. So I think that the first big thing we learned was the potency of the risk of infectious hazards.

And this is important. The world worries about natural disasters, and insures itself against those and other hazards, but not against infectious hazards.

The second thing the world has learned is that Ebola was bad, but it is not the worst threat we are going to face. And it is also not going to be the last. We are seeing an increasing number of new infectious hazards. There have been 1,500 new infectious pathogens identified in the last 50 years alone. These pathogens have got the capacity to wreak tremendous havoc and we are not prepared. I think the world has realized that these are potentially the most dangerous threat we face, and that this threat is getting worse. All of the drivers of infectious hazards are getting worse.

By the year 2050 we will have 9 billion people on this planet. As of last year, over a billion of them are travelling internationally. They are moving themselves and they are moving viruses. Over 60% of them now live in urban areas and the environment we live in is being degraded every day. The biggest unmanaged risk to businesses, to the economies right now, is infectious hazards. I think we have learned that and that this risk is getting worse.

The other thing we have learned, just to finish answering your original question, is that the world is not prepared. We learned through this crisis that there are some very simple things we can do to enhance preparedness at the national level, in terms of early warning and incident management, for example, and especially engaging the communities, because they are the key responder. The second thing we have learned is that, on an international level, we do not have the system we need to be able to support countries, as His Excellency said in his response. However, the World Bank has now started a new pandemic fund. The international system that works on emergencies is setting up a new system for working on infectious hazards. At the World Health Organization, we are overhauling our organization to be able to respond. I think we are starting to deal with that part of it.

The other big gap, however, we have is in the area of research and development. We do not have the tools that we need. So, as we go forward, we have to work based on the lessons we have learned: enhance our preparedness, enhance the international

response system and also invest in research and development to make sure we have the tools so that, for instance, Guinea does not have to wait a year for a vaccine the next time a crisis like this hits.

J. Chatterley:

Dr. Aylward, you have made some important points here, and we will come back to them. The idea of an alert system, where the incentive structure is for a country to recognize that it has a problem, to alert the world of a domestic health crisis, can mean the end of trade and it can mean the end of tourism. So we will come back to that issue. You also make a great point about financing the research and development (R&D).

May I also introduce Christopher Egerton-Warburton, Senior Advisor at the Global Health Investment Fund (GHIF). Mr. Egerton-Warburton, the crying shame here with Ebola was that we did have vaccines under development. That is actually very different from the situation we find ourselves with Zika today. How do we incentivize countries to work on these vaccines, and how do we calibrate the response that we need? Because even though we had vaccines under production, the response still felt very chaotic.

C. Egerton-Warburton:

Thank you, Ms. Chatterley. I would like to say a big thank you to everybody here for inviting me. You might wonder why I am here; my background might explain it. I started my career as a biochemist; was told that all biochemical problems would be solved very quickly, and was thus persuaded to become an investment banker. Now I feel like I have sort of returned to my roots. I am passionate about the science here and how one moves this forward, but looking at it very much with a financial angle.

The good news here is that a lot of progress has been made since 2000. We had a few not-so-great years in the 1990s, when global health and mortality pretty much flat-lined. But groups such as Gavi (www.gavi.org) or the Global Fund for Aids, Malaria

and Tuberculosis (www.theglobalfund.org) have been incredibly successful at moving the world forward. Had we had a major Ebola outbreak back in 2000, as we tragically did just recently in Guinea, the impact would have been a lot worse. So let us now assume that we are starting from ground zero. There is a base.

As Dr. Aylward said, regarding the 1,500 new pathogens, you would love to have a perfect drug, or a perfect vaccine, or a perfect diagnostic for all of them. The truth is that we do not. We have to prioritize and we have to be able to think through which of the challenges can be addressed, and which of the challenges are scientifically incredibly hard. We would love to have an HIV vaccine that worked perfectly. But the problem there is not a lack of willingness, it is the height of the scientific bar. So, coming back to what you said before, I think what the world has come to realize is that we have a moment now where the Ebola crisis has focused global attention on making sure that we do not end up in this situation again. We have to harness that attention and make sure that it does not slip away. Because even now, the energy and the momentum are dropping, nevermind in three years from now. Nothing against CNN or CNBC or any of the other news channels, but the world moves on so quickly today.

The reason we are all here today is to try to make sure that we can capture that energy and make sure that vaccines are created for those diseases where vaccines can be created; that we pool the knowledge we have in countries such as Russia with countries such as the US, such as China, where at the moment that work is not being done on a collaborative basis. Hopefully, if we can get the scientists working and get the funding working, we can make sure that we do not end up as we did before, in a situation where people were sort of jumping up in little laboratories and saying, "Hey, that Ebola? I've got a potential vaccine and I've been trying to get it funded for years, but nobody ever returned my calls!"

J. Chatterley:

We will come back to that point as well as to some key features of the epidemic.

Professor Mukesh Kapila, I would like to hear your thoughts on this as well, because the global threat out there is infectious diseases. However, if we invest the money into finding cures or vaccines for all these infectious diseases, we will spend trillions of dollars. And, as bad as these diseases are, on a scaling basis, Ebola is far less potent than the likes of HIV and AIDS. So how do we calibrate that funding?

Prof. M. Kapila:

Thank you. I am very glad to be here. I remember the beginning of the epidemic and the dysfunctional response of the world. It felt like we were at war. And the first casualty of war is the truth. We ended up spending billions of dollars on an epidemic which was undoubtedly very serious and a great threat – I am not discounting that – but I can definitely think of better ways that we could have spent at least USD 6 billion of the external funding that was thrown at West Africa, most of which was spent on supporting the international response, as opposed to supporting national and local responses.

That having been said, let us come back to your question. In the end, 11,000 people died of Ebola in Guinea. Those were 11,000 tragic and unnecessary deaths. That number of people probably die in road traffic accidents every day, of malaria, and of so many other conditions. Without taking anything away from the investment on vaccines and new drugs, we have to take a comprehensive, balanced approach to public health. We should continue to invest in basic sciences.

There is an opportunity cost. If you spend on something with your left hand, then you cannot spend it on something else with your right. In overall public health policy, one has to judge what is in the best interest of public health. The right balance is really based on what the most important condition is in a country, and over how long a period of time. So it is a balance of that. This is not to say that we are wasting money on vaccines. Do not get me wrong. That would be quite the wrong conclusion to draw from what I am saying. What I am saying is that vaccines by themselves are only one element of a broadly funded public health strategy. History teaches us that all the

great public health infectious problems of the past, such as TB, for example, were not solved with vaccines. They required investment in many other areas. I think that is what we need: a broad public health approach and a broad health financing approach that is not narrowly targeted.

J. Chatterley:

I can see plenty of the panellists here that desperately want to tackle you on some of these points. But let me just bring in Mr. Oleg Deripaska, President of UC RUSAL, the largest foreign employer in Guinea. You have an incentive, above anything else, to help out here. Talk to us about how critical the public-private partnership was in tackling this situation in Guinea, and what can be taken from that to address crises like this in the future.

O. Deripaska:

First of all, I would like to say that it is important not to panic. We are working closely on an ongoing basis with the government in Guinea, under the leadership of President Condé. It was important that all of us have an understanding of what is going on, of what measures we are taking. Clarity for us, as you said, played an important role; it was key. Second, we should not undermine the efforts of the Russian government, and the immediate reaction following the request for assistance from the Guinean government. The Russian Ministry of Defence and the Russian Special Agency, under the guidance of Dr. Anna Popova and scientists who were immediately parachuted, literally, into the country to try to understand and tackle the problem. It is important to stay in contact, to coordinate. And it is important not to panic.

I believe we have paid our duty because we have been working in this country for more than 10 years now, and we have always been supported by the government. It is important to join forces and try to implement the best practices that could have an immediate impact. We are very happy to further support all efforts in Guinea, which

would be done by the Russian agency and Russian government, and we will be more than happy to cooperate with anyone who wants to be part of it.

J. Chatterley:

Can I pick up on that point about the Russian response here? We are joined by the Deputy Minister of Healthcare of the Russian Federation. Minister, Russia has a vaccine but it is not recognized by the World Health Organization. If we are talking about a global response and a coordinated response, why is Russia's vaccine not more prevalent? And perhaps I could argue that if it were Johnson & Johnson producing a vaccine maybe it would be more prevalent. What happened here?

С. Краевой:

Добрый день, уважаемые коллеги! Добрый день, Ваше высокопревосходительство господин президент!

Мы признательны за организацию этой сессии, которая посвящена очень важной проблеме. Мы часто говорим о благополучии населения, о том, что мы стремимся к экономическому росту. Однако наступает момент, когда мы понимаем: человек может быть беззащитен перед природой. Самый яркий пример этого за последнее время — геморрагическая лихорадка Эбола. Это не новое заболевание, оно существует с давних пор, но сейчас возникла очередная эпидемия. Законы природы таковы, что, пока возбудитель не будет полностью ликвидирован, мы не застрахованы от возврата эпидемий, в том числе лихорадки Эбола.

На встрече генерального директора Всемирной организации здравоохранения госпожи Чен с Президентом Российской Федерации Владимиром Владимировичем Путиным, состоявшейся 13 октября 2014 года, обсуждалось много важных вопросов, в том числе и вопрос о помощи Российской Федерации в борьбе с лихорадкой Эбола. По результатам этой встречи Президент Российской Федерации поручил Министерству здравоохранения приступить к

разработке иммунопрофилактического средства — вакцины от лихорадки Эбола. Эта задача была поставлена перед ведущим научно-исследовательским учреждением — Институтом эпидемиологии и микробиологии имени почетного академика Гамалеи, который возглавляет член Российской академии наук Александр Леонидович Гинцбург, присутствующий в этом зале. Используя многолетний опыт работы с самыми передовыми биотехнологическими методами, сотрудники института провели полный цикл доклинических исследований и клинических испытаний и зарегистрировали в декабре 2015 года две вакцины против лихорадки Эбола.

Есть два подхода к борьбе с инфекционными заболеваниями. Первый, наиболее прогрессивный, — профилактика. Самый эффективный ее вид — специфическая профилактика, или вакцинопрофилактика. Второй подход — лечение заболевших, когда речь идет о том, чтобы остановить эпидемию.

Вакцины, созданные в Российской Федерации, являются по-своему уникальными и самыми передовыми. Это так называемые векторные вакцины. О механизмах их действия и методиках получения неоднократно говорилось как на международных площадках, так и во Всемирной организации здравоохранения. Эти вакцины абсолютно безопасны, потому что не содержат возбудителя. Они содержат ген, который создан искусственно и кодирует специфический белок, вызывающий иммунный ответ. Ген встроен в безопасный вирус, доставляющий его в организм: там запускается процесс синтеза антигена, а на антиген вырабатывается соответствующий иммунный ответ.

J. Chatterley:

Minister, may I just stop you there? You are making some very important points here about what Russia actually achieved. I will come back to this. I want to introduce the President of Médecins Sans Frontières (MSF), Ms. Meinie Nicolai, who obviously was at the forefront of the Ebola first action response team. I know you also lost a number of your colleagues fighting Ebola. You said to me, before the panel started, that we

are still not prepared. You also said that one of the other critical factors in this is that there is no incentive for countries that find themselves in this kind of crisis, to announce that they have an epidemic, because it is critical for their infrastructure, for their business, for their trade, it is a life and death matter. How do we turn that around? And is there a role here for public-private partnerships to incentivize countries such as Guinea to say, “We have a problem and we need help”?

M. Nicolai:

Thank you. I am very happy to be here with the President of Guinea and the two Ministers, and I am very pleased to share the experience of MSF in this terrible Ebola epidemic. Thank you for the invitation.

We do not have to repeat this, but we treated 5,000 Ebola-positive cases – an enormous number – of whom 2,600 died, which is a terrible experience. You said earlier that we should not panic, and we tried to face this. We had 15 treatment centres in the three countries. We had 28 staff infected out of 5000, which is relatively low, one could say, but we lost 14 colleagues. And that is a lot. And then, of course, 500 healthcare workers died in this epidemic in the three countries.

We have looked back on this epidemic; so has the WHO, and the different governments as well. What can we say about this epidemic? I will come to this point. First of all, we would argue that the response to this epidemic was a global failure. It has been too slow, there has been a lack of leadership, there was ineffective epidemiological surveillance. There was, of course, a lack of treatments and vaccines available at the moment that we needed them. This is not unique to Ebola. We need better collaboration internationally, and we definitely need the BRICS countries. The BRICS countries have a very important role to play in terms of developing vaccines, in terms of treatment; we work with the Chinese, for instance, on new treatments, and that is very important.

A specific element that you were highlighting is that there is an international health regulation, which is an international legal instrument that is binding and that includes

all the member states of the WHO. It entered into force in 2007 and it requires countries to report certain diseases, outbreaks, and public health events to the WHO. This regulation defines the rights and obligations of countries. The problem is that there is not a lot of incentive for countries to declare an epidemic; especially for the poorer countries. What incentive do countries have to declare a deadly disease in time, so that we can all react and try to stop it? Knowing that there will be no economic or other support and that there is a big risk of economic decline, ports being closed, tourism falling away, and businesses withdrawing from the country? I think that is something that needs to be highlighted, and not just specifically by us: internationally, countries need support when they declare an epidemic. Especially the local population benefit enormously, because the sooner the epidemic is recognized and responded to, the better the outcomes we may have.

The other point I wanted to make is that we also need regional preparedness. We saw it in this case. It started in the Guéckédou region of Guinea. It is geographically a region where three countries meet, and where a majority of the population lives. There is a lot of trade going on between the three countries, and we know viruses do not have borders. So, even if we close borders, people will still trade, people will still travel. If one border is closed, they will use another. So we need regional response and preparedness.

We are afraid, looking at the situation today that we are not ready for the next epidemic, and here I join Dr. Aylward in what he was saying earlier: we are not ready for the next epidemic. We need massive investment, emergency response capacity, surveillance and response teams, and incentives and support for countries to address this. On the whole humanitarian agenda, it is a mixture of development and humanitarian aid. We are talking about resilience, that countries need to be resilient to deal with these problems. An epidemic like this is outrageous, and countries need support. We have to work on that.

J. Chatterley:

I see two things here. Mr. Egerton-Warburton, I want you to come back on this. First, the emergency response and helping these countries so that they are not afraid to say that they have an epidemic. The second thing is, in order to have that emergency response ready, you need the vaccines there, or at least some kind of investment in that, in order to be able to have an immediate response to be able to tackle whatever the virus or the epidemic is. Funding and financing: how do we tackle those two things?

C. Egerton-Warburton:

That is the 'million dollar question'. The fact of the matter is that we have to come together, we have to create a pool of financing that will be available and that will be sufficient – whether that is making sure that WHO and the various financing arms are put in place there, or that there is an enhanced health system strengthening in the existing countries.

J. Chatterley:

When you say “pool of financing”, how much are we talking about?

C. Egerton-Warburton:

Most importantly, I think we need to make sure that the research gets done. Here the trade-offs are very, very attractive. It is estimated that, in order to prepare ready-for-human-use vaccines against the 10 most likely pathogens that could cause an epidemic, it would cost the world about USD 2 billion today. Not in one go, that would be spread over about 10 years, so it is about USD 200 million per year. Compare that to the USD 6–7 billion we spend on one outbreak.

Bill Gates likes to say that vaccines are the best buy in healthcare today. I would argue that in vaccine research for some of these diseases that are vaccine-preventable, where we can do the science, the trade-offs are attractive. I want to

differentiate that from a number of non-vaccine-preventable diseases, such as HIV, which we would love to have a vaccine for, but, scientifically, that is a real challenge. The pitch, in which we have a number of countries coming together, is really to create a solidarity fund that all countries would want to contribute into, because at the end of the day you do not know where these outbreaks are going to come from. And everybody wants to have access to these vaccines, if they can be produced.

J. Chatterley:

We have heard from a number of people here about the quality of the Russian vaccine that was produced, and yet it is not globally recognized by WHO. We will talk about that in a few moments. But first, I would like to introduce Dr. Anna Popova, Head of the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing, and the Chief State Sanitary Physician of the Russian Federation. Just give us your sense of what we have learned from this and, in particular, Russia's response and how you think that can translate globally.

А. Попова:

Большое спасибо за предложение рассказать об уроках, которые мы вынесли. Разработка вакцины всегда занимает годы и требует очень больших денег. Если началась эпидемия, невозможно получить вакцину немедленно: это надо четко себе представлять. Нужны меры немедленного реагирования. Доктор уже говорила о том, что нужно сразу же информировать людей.

Об эпидемиях говорят уже первые в истории человечества письменные памятники, но, вероятно, они бывали и раньше. Чума унесла пол-Европы, «испанка» в 1918 году выкосила население трех стран. Сегодня мы живем в другом мире. Ежедневно совершается 100 тысяч рейсов, которые перевозят 3,5 миллиона человек. Это скорость перемещения любого инфекта на планете, поэтому быстрота реагирования крайне важна.

Далее, надо понимать, что каждая эпидемическая ситуация — это экономический стресс для любой страны, даже для страны с крепкой экономикой. Ежегодно страны, затронутые эпидемией лихорадки Эбола, и те, которые граничат с ними, несут убытки в размере более 3,5 миллиарда долларов. Экономические последствия эпидемиологических стрессов еще плохо просчитаны.

Деньги нужно вкладывать, рассчитывая риски для здоровья населения, что и произошло благодаря нашему взаимодействию с социально ориентированным бизнесом, в том числе с российским бизнесом в Гвинее. Мы оказались в этой стране в течение недели после того, как получили обращение господина Конде. Это был первый выезд российской специализированной бригады за последние 25 лет. Нам было бы сложно ориентироваться на чужой территории, если бы не российский бизнес, который там присутствовал и обеспечил нам связь, транспорт, безопасность. Государственные структуры, вероятно, не смогли бы этого сделать. Затем стало понятно, что не хватает коек в стационарах, нет правильно организованного инфекционного госпиталя. Бизнес построил госпиталь на 64 койки, в полном соответствии с требованиями биологической безопасности. Сегодня это единственный стационарный госпиталь в этой части Африки. Следующий шаг, который мы делаем сейчас, — это создание научно-исследовательского российско-гвинейского центра, и здесь тоже помогает бизнес, который имеет технику и мощности.

В тот момент Гвинея находилась в катастрофическом положении с точки зрения системы реагирования. Сегодня Всемирная организация здравоохранения меняет архитектуру этой системы. Конечно, при этой замене нужно будет учесть то, что выяснилось в период эпидемии.

Для нас это замечательный пример государственно-частного партнерства. Сейчас российский бизнес присутствует во многих странах. Он участвует в реформе системы здравоохранения, не подменяя государство. Хочу еще раз

обратить внимание на крайне высокую социальную ответственность, которую наш бизнес проявил в тот момент на территории иностранного государства.

J. Chatterley:

There is a whole host of things there, but I think the bottom line you pointed out is that, actually, businesses are more nimble than governments when it comes to responding to these types of crises. I guess my question would be: how do you incentivize businesses to do that? The point with RUSAL here is that there was a vested interest in actually helping Guinea, even though you may have done it even if there had not been one. How do you incentivize other businesses in other countries to step up and say, "You know what? We will donate money here." How do you do that? Mr. Deripaska, I am asking you.

O. Deripaska:

I think we need to ask NGOs and governments. We do not need to be incentivized more; we have already been incentivized to help. But, as I said, first you need to have good people on the ground. Each company must have a good working relationship with the other, not just taking resources and paying taxes, but trying to understand its purpose. This is not specific to Guinea, it applies to any country still in the early stages of development. They have a lack of funds, but no lack of competence. I think that companies with big projects in these territories must pay more attention. They should do more than pay taxes and run formal, corporate social responsibility (CSR) programmes.

We need to be part of the development of these nations, as it used to be in the Soviet Union. We need to try to understand how they get access to education and what could help them create local, social momentum and to promote good people. In our case, of course we work with the government of Guinea and with the President, who pay a lot of attention to immediately mobilizing not only UC RUSAL but other participants as well. That, I think, is very important.

J. Chatterley:

Professor Kapila, I want you to come in here, too, because this is part of the solution to the problem you were suggesting – that, actually, unfortunately, in the grand scale of things, you would maybe not push resources to certain issues such as Ebola because there are far greater issues out there. It is a contentious point, but you kind of made it.

Prof. M. Kapila:

I did make that point but it needs to be put into context. I totally agree with Mr. Egerton-Warburton that we need to find imaginative, long-term, global mechanisms whereby we can invest in both the science and into new technologies, such as new vaccines, as well as into making these available. That takes a long-term approach; nobody can do it alone. We therefore need public-private partnerships. I think that is so much common sense that it is hardly worth discussing, really. And yet, there are reasons why we are debating some of these things. I will make a couple of points here, if I may.

The first reason is the question of trust. You cannot have public-private partnerships if there is no trust. What Ebola has shown was that, as soon as this little virus came along, as people started getting sick, all trust broke down within families and between communities and populations and their own governments – the ones that were supposed to protect them – because their national health systems crumbled. It broke down between neighbouring countries and across the world, because everyone wanted to close their borders. The crumbling of trust. Rebuilding that trust is the foundation for scaling up public-private partnerships.

J. Chatterley:

What about trust in the government in the country where the epidemic began? For instance, some look at a country like Guinea – I do not want to point fingers – and they worry about corruption. They worry about where the money will go. They worry

about whether they are actually getting all the information, or about whether there is actually an epidemic in the country, which goes back to the issue of providing incentivization for these countries to admit that there is a problem in the first place. How do you get around those issues?

Prof. M. Kapila:

There are no shortcuts. That was the second point I was going to make. You do not build a house by building the roof first, because your roof will crumble before you even touch the ground. You build the foundations, and then you build up, and one day you will have a solid house.

What Ebola has shown us is that, as soon as this virus came along, everything crumbled, because the house was not solid despite the millions that had been spent on development funding for health care centres; I speak as a former Head of Department in the British Government's Department for International Development. Moreover, I myself have spent a lot of time in West Africa, particularly in Sierra Leone, where we spent hundreds of millions on development of the healthcare system over at least 20 years. All of that was worth nothing once this epidemic outbreak came along. That is partly because of all the reasons you said, such as corruption or the lack of accountability, and partly because we are not starting from the ground up. In the end, this epidemic was controlled not just because of the billions that came in, not by the military or the British Navy or the French Navy, which came in, nor the Americans that came into Liberia, but by the communities themselves. It was done by the people at the frontline of the epidemic.

My plea, if you will, in terms of the main thing that needed to be done, is firstly, to not panic, and secondly, to actually be prepared to stay for the long-term. This applies to both vaccine development, as well as other investments to develop public systems, to develop good governance, good health systems, and good health infrastructure. That takes a long, long time to do. The real test of friendship between people and between countries is not how many billions you pour in when there is an emergency, but

whether you are there 10, 20, or 50 years later, in partnership. I think the business sector knows this only too well. Businesses play for the market for entire decades, if not longer.

J. Chatterley:

But with results. They also have quite a lot of short-terms in there as well.

Prof. M. Kapila:

That may be so, but I think the search for results is not a bad methodology. Trust, however, and focusing on results, building from the bottom-up, and taking a long-term approach are what we really need.

J. Chatterley:

Dr. Aylward, I want you to come in here. I know you have a point to make as well, but I also wanted to ask you a question. Dr. Popova made the point that vaccines actually take a long time. From my perspective, the difference that I see between what we had with Ebola, where vaccines were available but our response was almost catastrophic and dysfunctional at times, versus something like Zika, where we were kind of blindsided. You are talking about reforms within the WHO. How are we doing on Zika?

Dr. B. Aylward:

A lot better. I would like to come back to your earlier question about the private sector and incentivizing the private sector. You do not have to incentivize the private sector; it is hugely incentivized – as we saw by the actions of UC RUSAL – to be relevant in crises.

J. Chatterley:

But surely you are not that incentivized if it is not relevant to you, or if you are not necessarily in danger. Guinea is a long way away.

Dr. B. Aylward:

No, you do not run a business that way. You have to manage your risk and look at your risk. I would ask our experts to comment on this, but I think that business is increasingly aware that the biggest unmanaged risk is infectious hazards. They get that. As I talk to industry about collaborating on infectious hazards, they say, “We don’t have mechanisms to do it.” I work at a UN agency; we cannot work with the private sector. There are huge barriers to that which we have to address. There are problems of expertise in the private sector; that is where public-private sector collaboration comes in. RUSAL reaches out immediately to the Russian government and asks, “How do we do this or that?” or reaches out to others to do that. But we have to set these things up beforehand.

However, I would argue that there are quick fixes – in this aspect I would not agree with you, Professor Kapila. You can quickly put in place a mechanism to interface with the private sector. It should be a big part of what WHO does in its reform. You should establish the mechanisms to be able to work with them, so that when things do happen, you can work very rapidly with the private sector. First of all, we have got to make sure that our member states agree we can work with the private sector. This is a big challenge. Of course, there have to be mechanisms around how that would happen. You have to be able to do it; there is so much talent, so much expertise, and so much reach within the private sector.

J. Chatterley:

Who needs naming and shaming? Which countries are not willing to recognize that? Some of the biggies? Are we talking about the US?

Dr. B. Aylward:

There are 194 of them, so that is a challenge. However, I think we are making progress on that. We just passed a new framework on how we can engage with Non-State Actors, as they are called, but you can make it even more local. In Guinea, to

come back to the point that Mr. Deripaska was making: they had a long relationship with the government. They knew how to talk to government. They did not panic and they knew how to stay involved. I think industry is highly incentivized. Regarding your question on how to incentivize countries to report an epidemic, let us look at what happened when President Condé reported Ebola and then the WHO declared a “public health emergency of international concern”. Some of their closer allies, like Russia, stayed. Russia came and brought in more resources. Most countries stopped. Most countries stopped travel, stopped trade, they blocked Guinea when it declared the epidemic. So how do you prevent that?

The first thing you have to do is to take away the disincentives. The countries that blocked travel and trade should have been named and shamed; there should have been consequences for them. That should have been step number one, so that Guinea and the other countries were not isolated. The second thing that ought to be done is to build that trust, as Professor Kapila said, through your preparedness work. You have to have a preparedness agenda. You have to work with Russia, work with the other countries that are present, and with your private sector. The third thing, which is important as well, is a financial incentive to declare. About a month ago I was at the World Bank in Washington and the Board voted on a new pandemic emergency facility, which will release USD 500 million very rapidly if countries declare something early that needs a response. I think we are starting to create the financial incentives. We are not there yet, but I think we are starting to get there. But industry is *highly incentivized*.

J. Chatterley:

Give me another example of a situation like this, where you had a country such as Russia immediately step in and say, “Let me help!”

Dr. B. Aylward:

We saw a lot of that with the Ebola crisis.

I think France also tried to help. It was perhaps a little bit slower getting there.

J. Chatterley:

Not the Ebola crisis, something else.

Dr. B. Aylward:

Another crisis?

J. Chatterley:

Yes.

Dr. B. Aylward:

Take the Yellow fever crisis that we are dealing with right now in Angola, and now in DRC. Brazil came in and very rapidly released USD 1 million.

J. Chatterley:

Is that government or is that corporate?

Dr. B. Aylward:

The government.

J. Chatterley:

I am looking for corporates. I am looking for all your incentivized corporates here that are taking action. I do not buy it.

Dr. B. Aylward:

Corporates have huge incentives!

J. Chatterley:

I maybe agree with you that they are aware of the issues, but how do you take action? How do you allocate a piece of your budget and say, “Let me be careful about some infectious disease somewhere”? Mr. Egerton-Warburton, I know you are going to have a comment on this. I can see it, but Ms. Nicolai is going to come in first.

M. Nicolai:

I have a few points regarding the private sector and the incentivizing. I agree with Dr. Aylward that business is incentivized in general, because they are for-profit organizations, so that is an intrinsic incentive. But what is important – Dr. Popova and Mr. Deripaska mentioned this as well – is social responsibility in business. This is something that I think all of us need to stimulate somehow, and not panic.

We have another example of where business was positive: in Belgium. We are based in Belgium and we were the biggest responders to the Ebola crisis. In fact, all EU Member States had stopped travel to the infected countries, as Dr. Aylward said, including all the airlines. SN Brussels was one of the only ones that still had flights going, and even they were about to close it down. We went to their Director’s office and spoke with the staff. Our infectious disease specialist came along and spoke to the unions, to the Directors’ Committee, and pleaded with them to keep the lines open to Guinea, Liberia, and Sierra Leone. And they did! So that was another example of where business had the courage to continue. I think this needs to be mentioned.

J. Chatterley:

Now that is profit maximization, because they still have the flights going back and forth. That I understand.

M. Nicolai:

Yes, but on the other hand, in research and development (R&D) the problem is that it is all just for business. The problem was that we did not have a vaccine when the

epidemic started, nor did we have any treatment. That is why 11,000 people died. As you were saying, Dr. Popova, it all goes very fast. But business is not incentivized to look at neglected problems. Research and development for diseases should be a public good. We should all ensure that it is available and that there is investment in it for the public good, and not for business purposes. That is an important point.

J. Chatterley:

It is huge. Mr. Egerton-Warburton, can you comment on this?

C. Egerton-Warburton:

I think that, when we talk about business, we need to separate the companies that have major economic activities in a country. Many businesses in Africa are in the extraction industries, but increasingly in other areas too, for example, fast-moving consumer goods. Then there's the pharma industry. Let us remember that these are two different things. The message I am receiving a lot from the pharma industry is that, every time there is one of these crises, there is widespread panic and the pharma industry is told "I need a vaccine and I need it now!" by the President walking into their offices. That causes them to put on hold a whole range of programmes they were working on before. That has an opportunity cost. All the scientists jump to it, by the way, they are the best, most motivated people. They will work 24 hours a day to move things along. But there is an impact. You cannot split yourself in half. So they do all this work and then the crisis moves on, and you are left with a semi-finished vaccine, which is completely useless.

I will come back to what Dr. Aylward was saying: we need to become more coordinated. We do not actually need five Ebola vaccines. The world needs to work out what is the best long-term prophylactic Ebola vaccine and what is the best short-term vaccine, using the vectors the Minister talked about; decide on which are the best models. In my view, we need to divide up the world's problems, between Marburg, Lassa fever, Yellow fever, among others. This is going to sound awful, but

we need to 'pick some winners' and tell company X that "your job is to make sure we are ready for this". Those companies will respond. We need to do this not just with companies, but with countries! We need to be able to turn to Russia and say, "You are going to be the experts in this area. Please help us, and do it in a way that we don't feel like this is turning back into [an issue of] a tribal, political nature. These are global, public goods."

J. Chatterley:

Did that happen with Ebola? Because Russia had a great vaccine. The Deputy Minister told us about that. Like I said earlier, if Johnson & Johnson would have produced that vaccine, would it have been used more widely?

C. Egerton-Warburton:

I think the challenge here – I speak as a former scientist – is a sort of lack of 'translation'. The more communication we can have between the leading laboratories in the West and those in Russia, in Asia, in China, among others, the better. Part of the sensitivity here is that if you were in the UK and wanted to know who the experts are in Ebola, it actually was the British military. I think the Minister mentioned this. If you went into the US, it was often the US military. So we have a lot of great science, but it is perhaps not always being done in places that are natural partners for collaboration.

J. Chatterley:

Do you think the fracture lines here between Russia and the West hurt the response to Ebola?

C. Egerton-Warburton:

I would put it a different way. I would ask: can we not use the Ebola crisis to find areas where we can help each other and work with each other? I would love to spend more time with the scientists in Moscow.

J. Chatterley:

I think you just said 'yes' there, in a reverse manner.

C. Egerton-Warburton:

You are putting words into my mouth.

J. Chatterley:

I heard a 'yes' there. Minister, please come in.

С. Краевой:

Обстановка настолько сложна, что одному государству и одной лаборатории справиться тяжело. Говоря о том, что сейчас существует несколько вакцинных препаратов, мы должны понимать, на какой стадии разработки они находятся. Вы спросили, насколько качественной, эффективной и безопасной является российская вакцина. Я хочу отметить, что это единственный препарат, который официально зарегистрирован на государственном уровне. Средства от Johnson & Johnson, GlaxoSmithKline, Merck еще не имеют статуса официального лекарственных препаратов.

Сегодня мы говорим о государственно-частном партнерстве. Действительно, российский бизнес хорошо представлен в Гвинее. Он может оказать населению Гвинеи помощь в вакцинации, а Всемирной организации здравоохранения — в получении дополнительного подтверждения эффективности лекарственного препарата и в продвижении новых лекарственных препаратов для борьбы с инфекционными заболеваниями. Поэтому роль государственно-частного

партнерства в борьбе с вызовами современности, которые влияют на экономику различных стран, на их благосостояние, крайне велика.

J. Chatterley:

We have to wrap up this panel session, but I just want to go down the line and get a sentence from each of you on an action plan. What do you think is the most important thing that needs to be done now, whether it is further focus on public-private partnerships, incentive action of where the money needs to be sent, whether businesses need further incentive or not. I would just like a sentence from each of you. Ms. Nicolai, please kick it off.

M. Nicolai:

I will repeat myself, but I think we need incentives for countries to declare epidemics. In this case, they did but it was late, and it was all recognized late, so the epidemic had a chance to replicate. Especially in Sierra Leone, we had a lot of problems trying to get it out in the open. Early declaration, preparedness in countries, and a regional approach are for me the most important things.

Then research and development for new treatments and vaccines need to be pushed as a public good, and not for business. We need other kinds of stimulants to have this research and development ready, and ensure that the products are available for the poorest countries at an adaptive price.

J. Chatterley:

Let me stop you there, because we have to wrap up. If you can please keep it short, that would be great. Minister, just a quick sentence, please. What is the critical element here for you? What needs to be done? One sentence. I'm daring you!

С. Краевой:

Вот самое важное, что мы должны сегодня понять: государства, в том числе Российская Федерация, твердо настроены на борьбу с инфекциями, в том числе с геморрагической лихорадкой Эбола. Российский бизнес готов им в этом содействовать, в частности оказать Гвинейской Республике помощь в вакцинации от лихорадки Эбола. Решение об оказании помощи в вакцинации путем объединения усилий государства и частного бизнеса принято на самом высоком уровне, его одобрил Президент Российской Федерации Владимир Владимирович Путин.

J. Chatterley:

Thank you very much. Professor Kapila?

Prof. M. Kapila:

To complement better global and international cooperation, with which we would all agree, we need a bottom-up approach, involving communities, empowering governments, and strengthening leadership so that people get the health systems they deserve. They must be empowered to “hold accountable” when things go wrong. If we only do that, and connect the global to the local, I think we will make a holistic difference to this set of issues.

J. Chatterley:

I like the word “accountability”. Mr. Egerton-Warburton?

C. Egerton-Warburton:

I feel I have had the microphone a lot so I will be very brief. The reason I am here is that these are global issues. They require us to build bridges and create, perhaps, non-traditional relationships. If we work together these problems are solvable.

J. Chatterley:

Dr. Aylward?

Dr. B. Aylward:

I think the answer is in the panel: you have NGOs here, you have some of the most powerful businesses in the world, you have governments, you have investment bankers, and more. You need an integrated international system that attacks high-threat pathogens. You have to treat them in a special way and be able to draw across those resources. This is not as important for other hazards we deal with.

J. Chatterley:

Mr. Deripaska?

O. Deripaska:

I agree that we should take the lessons we have learned and organize the system. Our major problem was that we tried to spend less time in understanding what we could do. Since it was not our main business, it took us most of the time to identify the issue. It was important for us to understand how we could help the Russian agency, and facilitate the best way that they could be more effective on the ground. It is not so much money. Of course you can see what was spent in loss of life, in effort, in volunteers and doctors. It was most crucial at that point, the risk they were taking, including the military who were already on the ground.

I think more could be done if, as I understand was the case with the airlines, you would come and train, in a corporate way, so that we understand what the risk is, what the resources are, what the alternatives are. This is an ongoing issue. We need to learn from these experiences, study them, and create some sort of organizational response for government, for NGOs, for people who want to invest, and for companies not yet ready to help solve the problem.

There are a lot of companies that take resources, put them on the stock exchange, and they have no idea beforehand that big mining companies would come and try to explore, building roads, bridges, hospitals, trying to create villages with normal social infrastructure.

Having a system is very important, because we should not be educated by the media. It is the worst possible way of educating yourself, to see the news as an education manual.

J. Chatterley:

We need better education and better coordination. Dr. Popova, last words on the critical element here for you.

А. Попова:

Сегодня было сказано много важных вещей. Совершенно очевидно, что недооценивать глобальные эпидемиологические риски больше нельзя. Посмотрите, что произошло в Западной Африке и что сейчас происходит в Америке с лихорадкой Зика: число стран, в которые она пришла, почти равно числу стран, для которых она эндемична. Мы не можем оставаться в стороне, мыслить категориями прошлого, думать, что все это — локальные явления. То, что происходит в последние два-три года, имеет характер эпидемии, если не пандемии, поэтому нужны консолидация усилий и системный подход. Всемирная организация здравоохранения сейчас занимается этим, меняя свое внутреннее устройство. «Врачи без границ» пересматривают свои подходы. Участие бизнеса в этом процессе — свидетельство того, что риски очевидны для всех. Я согласна с тем, что нужна наднациональная система. Бизнес должен вкладывать деньги не только в разработку препаратов, дающих возврат инвестиций, но и в повышение готовности систем быстрого реагирования на эпидемические угрозы.

J. Chatterley:

I think the bottom line here is better education and better coordination: quite a powerful call to action from this panel. Thank you.