QUALITY, STANDARDS AND TESTING IN THE FIGHT AGAINST COVID-19

VIRTUAL PANEL | AN INSIGHT
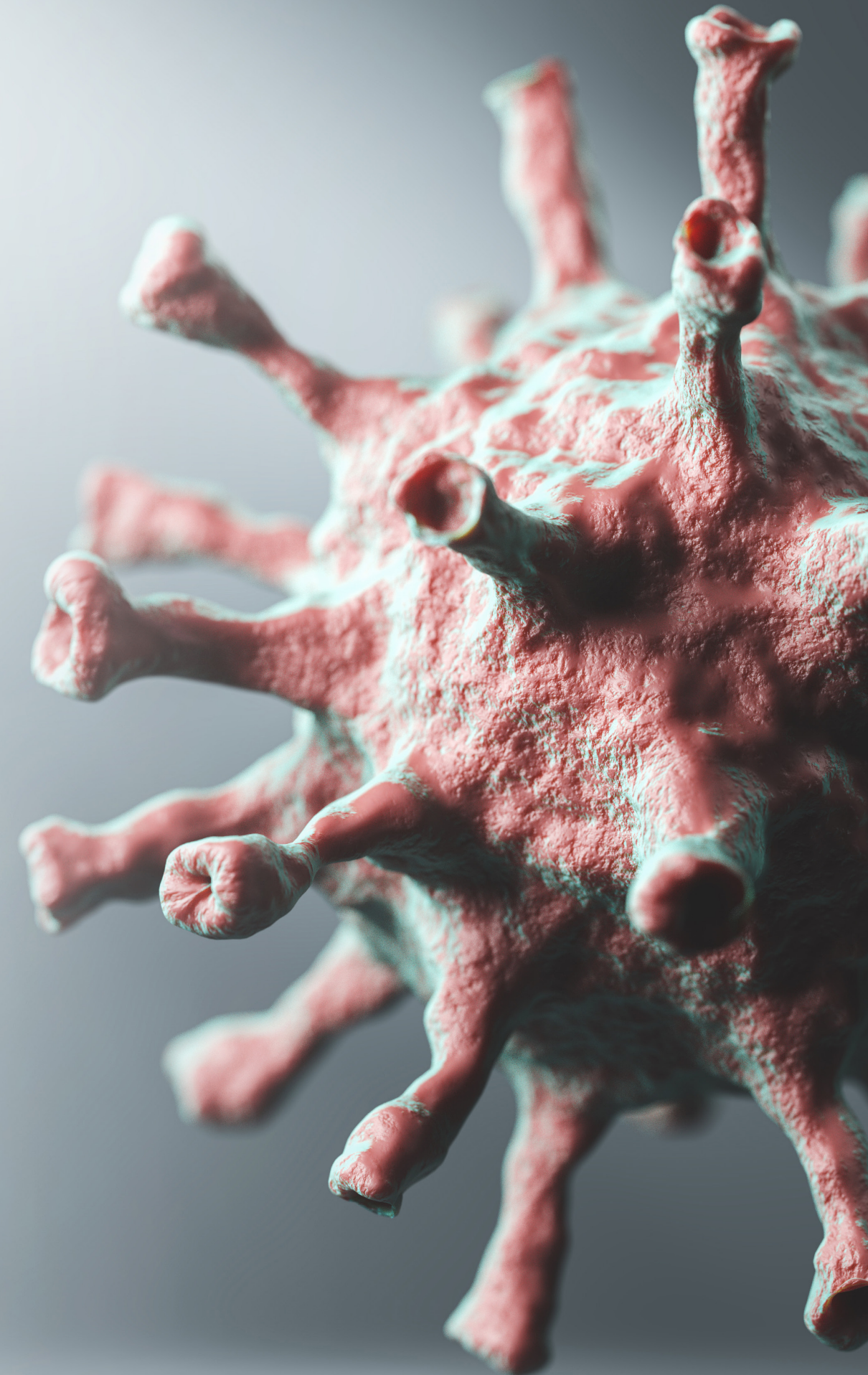
THE FIGHT AGAINST
COVID-19

Unforeseen and previously unknown, the Covid-19 pandemic has wrought a trail of destruction globally, spanning the economic, environmental and social dimensions of development. The most obvious effect of the outbreak is the danger to public health and safety: at the time of writing, the World Health Organization have confirmed over 3.5 million cases of the novel coronavirus, with more than 240,000 deaths. This has led to considerable pressure and strains on health services internationally, with concomitant shortages of qualified staff, personal protective equipment and testing kits, laboratory capacity to deal with a huge increase in diagnoses.

Moreover, the risk of endangerment to public health has resulted in widespread social distancing, quarantining and cocooning in most countries, leading to widespread cancellations and postponements of public gatherings across the arts, sporting competitions, religious worship, hospitality and entertainment sectors inter alia.

The Covid-19 pandemic has also wreaked havoc across the worldwide economy, prompting economic disruption unheard of in recent memory. The International Labour Organization (ILO) estimates that 25 million people worldwide may become unemployed as a result of the outbreak, causing an associated loss in workers' incomes of up to 3,4 trillion US dollars. Trade and investment flows have also been hit hard by the novel virus, with the United Nations Conference on Trade and Development (UNCTAD) estimating that between 30 and 40 per cent of global foreign direct investment (FDI) will be lost in 2020/21 as a result.

The environmental dimension has been one of the few to see some positive impacts, as a reduction in global economic activity has given rise to a reduction in harmful emissions, removing smog and particulates in some affected areas. However, no-one is sure as to whether this trend will be sustained in the longer-term. Furthermore, the sudden and sharp overburdening of health services may also give rise to unforeseen issues such as increased medical waste leading to a surge in harmful emissions from hospitals and other health facilities.

Given the immense challenges posed by the Covid-19 pandemic and its international character, it is incumbent upon international organizations to enhance their cooperation in order to maximize synergies, resources and expertise in coordination against the virus.

QUALITY, STANDARDS AND TESTING
MORE IMPORTANT THAN EVER

Covid-19 is disrupting millions of people's livelihoods, with disproportionate impact on the poor, thereby jeopardizing the successful implementation of the UN Sustainable Development Agenda 2030. Quality and standards play a particularly important role in mitigating the negative effects of the outbreak. The visualization below summarizes the link between the challenges faced due to the global outbreak of Covid-19, the potential role of quality and standards in mitigating its negative effects in the context of the UN Sustainable Development Goals (SDGs).

The UNIDO Department of Trade, Investment and Innovation (TII) is concerned with increasing economic competitiveness and investment through a range of services promoting quality infrastructure (QI), notably standards, metrology, conformity assessment, accreditation and certification. There are a wide range of potential applications of QI which could make a significant contribution to the international response to the Covid-19 pandemic.

For instance, quality controls can assure us that medical equipment is effective, while adequate testing standards in laboratories can ensure that we avoid faulty test results. Agreed international standards can also help us to be certain that technologies used in the mitigation of the pandemic are safe, while metrology and certified assessments can help with the development of vaccines in laboratories.

QI also plays a major role in addressing the economic implications of the crisis, particularly on trade and investment. Harmonization of standards ensures the continuance of global trade, an important consideration in vital sectors such as food and agriculture. These can ensure that the food we consume is safe for human health, through agreed hygiene practices and safety standards.

In the medical sector, the development of standards is essential to addressing shortages of personal protective equipment (PPE), ensuring that medical professionals and patients stay safe from infection. Mutual recognition of accredited test results facilitate trade in essential goods for crisis-hit industrial sectors.

Enhancing QI can thus play a major role in our common response to the Covid-19 pandemic.

SDG3
The number of infected people increases exponentially, while adequate medical equipment is scarce
• Reliable results of medical laboratories conducting tests to detect the virus are essential
• Quality control and product testing ensure that medical equipment is fit-for-purpose
• Laboratories support the development of new medicines and vaccines through related scientific testing

SDG8
Global trade contracts, while trade of medical equipment increases
• Trade plays an important role in ensuring the availability and affordability of vital medicines, medical products and protective gear
• Mutual recognition of accredited test results facilitates the trade of essential goods

SDG9
Quality infrastructure helps to mitigate the negative effects of the crisis and ensures the provision of essential services
• Quality infrastructure ensures the identification and dissemination of relevant standards, accurate measurement (metrology) and provides attestation (accreditation) of reliable test results
• Standards ensure technologies used in mitigation of the crisis are safe, and that privacy and users are protected

SDG2
Millions of people around the world depend on international trade for their food security and livelihoods
• Trade along global value chains needs to be ensured to sustain global supply of essential goods
• Hygiene practices and food safety standards are key to ensure global food supply

SDG12
Businesses worldwide struggle to keep up production of essential goods
• Business continuity, risk and emergency management standards are key to ensure the uninterrupted production of essential goods
• Standards ensure that goods produced in response of COVID-19 (protective masks, gloves, etc.) are fit-for-purpose while workers are kept safe

SDG15
Additional medical and hazardous (infected) waste is generated
• Standards help to manage the increased hazardous waste
• Testing laboratories can detect pollution levels

SDG17
COVID-19 is a virus which has paralyzed human interaction worldwide. International cooperation is thus essential in order to mitigate the further spread of the corona virus and to reconstruct our societies once the present outbreak has been tamed.

COVID-19

3 GOOD HEALTH AND WELL-BEING
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
15 LIFE ON LAND
2 ZERO HUNGER
17 PARTNERSHIPS FOR THE GOALS

WORKING TOGETHER TOWARDS COLLECTIVE ACTION

UNIDO works with a variety of international partners in the fields of QI, including standards, metrology, accreditation, and conformity assessment. in order to promote investment, trade and innovation in a variety of industrial sectors. These include international organizations such as the International Organization for Standardization (ISO); the International Bureau of Weights and Measurements (BIPM); the Organization for International Legal Metrology (OIML); International Accreditation Forum (IAF); International Network on Quality Infrastructure (INetQI) as well as relevant national level bodies, the private sector and other partners.

In order to overcome the Covid-19 pandemic, it will be vital for international organizations to enhance their existing cooperation, thus leveraging synergies in terms of knowledge exchange, economies of scale, joint actions and dissemination of best practices. A coordinated multilateral approach to the outbreak can thus enable the international community to establish a robust QI system internationally in order to tackle potential crises in future.

As an initial step to this end UNIDO convened a series of virtual webinars with international experts from counterpart QI organizations, in order to discuss the challenges thrown up by the Covid-19 pandemic for QI, how QI institutions can evolve to meet these challenges and what measures will need to be taken in future in order for QI to meet new challenges.

Consequently, on 17 April 2020 UNIDO convened an expert webinar elaborating on "Standards and Testing in the Fight against Covid-19" including the following high-level representatives:

Mr. Bernardo Calzadilla-Sarmiento
Director, Department of Trade, Investment and Innovation, UNIDO

Mr. Seán MacCurtain
Director of Conformity Assessment and Consumer Affairs, ISO

Mr. Andy Henson
Director, International Liaison and Communication Department, BIPM

Ms. Merih Malmqvist Nilsson
Chair, INetQI

Mr. Jianhua Xiao
Chair, IAF

Ms. Elsie Meintjies
Chief Technical Advisor, GQSPSouth Africa, UNIDO (Moderation)

The webinar attracted a truly global audience of **376** attendees from a total of **64** countries, who tuned in to listen to the discussion and participate in the Q&A session following the discussion.

Link to view the session:
https://www.youtube.com/
watch?v=KghJARrDgJc

INSIGHTS FROM THE PANELISTS

Mr. Bernardo Calzadilla-Sarmiento
Director, Department of Trade, Investment and Innovation, UNIDO

» **"We need to do to further thinking on how can we continue advocating the importance of standardization, quality infrastructure and metrology to cope with the crisis and also to cope with the post-Corona crisis and their re-emergence, because the process will bring us to a new era."**

» "The big concepts are readiness, being prepared, being flexible being adaptive. But it is also a time for coherence, for more coordination."

» "While I fully see a strong role for standards and quality, I think we, in the post-recovery, it will be the time for innovation and new technological development and certainly QI plays a very important role in relation to that as well."

» "We need to embrace this digital revolution, just on what we can do in relation to quality and standards it was elaborated by their respective institutions, but at the policy level I think that it shows that quality policy helps to be prepared."

Mr. Sean MacCurtain
Director of Conformity Assessment and Consumer Affairs, ISO

» **"From a quality infrastructure institution side, I think that we've got to be able to cooperate together, synchronize what we do and identify where we can cooperate. In terms of customs and trade, we've got to look at how can standards and how can we as institutions, ensure that trade can flow through borders, that customs officials can allow the flow of goods."**

» "I think that these standards [business continuity and technical standards for medical equipment and PPE] are vital and we've seen that they're even more vital when organizations want to be able to switch from manufacturing dresses or clothing to manufacturing masks. So, the availability of these can actually look at helping the supply chain. And that goes, also from manufacturing vacuum cleaners to ventilators, so the availability of these type of standards is crucial."

» The outbreak has given rise to new possibilities for standards, unthought-of just months before, such as proposals for standardization of temporary hospitals. Similarly, other unforeseen implications, including sudden human demand on food supply chains, migration, issues for customs and trade and climate change.

Mr. Andy Henson
Director, International Liaison and Communication Department, BIPM

» **"The standards are important and the testing is important, but behind them is the metrology. If you're not getting the right answers in this kind of a crisis, you have an absolute disaster beyond the immediate disaster."**

» "We're going to see a world that is prepared to accept change more readily than was the case."

» "We're seeing a number of trends that I think will have an impact going forward. One of those is redefinition. I think we're going to see an increase in the availability of intrinsic standards."

» The revision of the International System (SI) of units in 2018 has already opened up possibilities, but the pandemic has accelerated this process further, perhaps leading to a democratization of metrology to smaller laboratories. The availability of low-cost sensors will have implications for traditional traceability practices, with a larger number of sources providing predictions.

Ms. Merih Malmqvist Nilsson
Chair, INetQI

» **"At a time like this (…) it's easy to revert to nationalism and protectionism and it's very sad if we today cannot rely on testing to have been done properly, when it's delivered from another part of the world, It is a huge failure for all the work we have done."**

» "QI has to reinvent itself and embrace new technology to remain relevant so that when we do have the next crisis, and it might not at all be a pandemic, it might be something totally different, we have an answer to many problems that might come up."

» "It may in fact be the right time to redefine quality as a concept to also include sustainability. Which means that the QI institutions will be working to a triple bottom line: functionality, safety and sustainability, and this needs to be done in relation to each individual product and service."

» What countries and businesses, including QI institutions have to do in the long term, is to have sustainability, and to have rigorous contingency plans, not only for pandemics, but for any risks with catastrophic effects.

Mr. Jianhua Xiao
Chair , IAF

» **"The IAF's main priority during this challenging time is supporting IAF member accreditation bodies, their certification bodies and certified organizations to maintain robust accredited certification and ensure certified organizations are served in the best way possible, so that the accredited certifications continue its role to facilitate trade, support regulators and protect consumers and the environment in this period of time in the fight against Covid-19 and support to the resumption of industry."**

» Remote auditing and assessment tools will help certified organizations to be ready to spring back to support the economic and social impacts of this pandemic. The Covid-19 situation has greatly speeded up the use of a new technology to conduct research remote auditing and assessment.

» "We don't expect to have a similar crisis to occur in the future. However, we should always be prepared and the relevant IAF documents demonstrated the importance of preparedness. We will continue to enhance our work in this way, and support accreditation bodies and conformity assessment bodies, and in the end, the market."

Ms. Elsie Meintjies
Chief Technical Advisor, Global Quality and Standards Programme South Africa, UNIDO

» **"What is clear to me is that we are facing many, many challenges, but at the same time we are facing some very good opportunities in our new world of work. It is also a unique opportunity for us (…) as quality infrastructure institutions to really position our-selves uniquely in the world as to the service that we provide for the protection of the health and safety of consumers, citizens, flora and fauna of our countries. And as some-body said, we need to do more advocacy on the role of quality infrastructure; that would be absolutely critical going forward"**

» "The need for the quality infrastructure organizations to change is very clear. The writings on the wall. We have to start being nimble, we have to be proactive."

» "Within the framework of the SDGs and against the backdrop of promoting inclusive and sustainable industrial development, the global the continental and the country level quality infrastructure has and will continue to play a very significant role in the fight against the global pandemic that we are facing at the moment."

KEY TAKEAWAYS

» **The Covid-19 pandemic has presented the international community with a crisis in terms of responding to immediate challenges, but also opportunities in terms of implementing robust quality infrastructure and standards to combat future disruptions. Greater flexibility, preparedness and coordination are required in order to make this transition possible.**

» Reliability of test results, accreditation, metrology, certification and standards are vital to ensure that health services can combat the novel coronavirus, to maintain the continuity of vital supply chains during the lockdown, the development of new technologies that are being created to address the crisis, to ensure occupational health and safety and organizational resilience inter alia in the post-crisis period.

» The outbreak has given rise to a need to develop standards in areas that previously were unthought-of or did not exist, e.g. in the construction of temporary hospitals. International QI organizations will thus have to move quickly in order to meet new challenges and demands, in cooperation with their Member States.

» The pandemic has caused disruption to some global value chains due to a lack of cross-border trust, leading to protectionism in some cases. Establishing global trust and rigorous contingency plans will be vital to combatting future issues through enhanced QI.

» The emergence of Covid-19 has accelerated the uptake of online some online services, such as remote auditing and assessment, which could lead to an enhanced certification and assessment system in future. All of the participating organizations had used online media in order to advise their member organizations/member states on adopting best practices during the pandemic, however they should further embrace the digital revolution in their post-crisis operations.

» Developing countries are uniquely challenged by the outbreak, given their resources and infrastructure in comparison to high income countries, who themselves are struggling to contain the virus. In these circumstances, the sharing of expertise, lessons learned and best practices are crucial to avoid further contagion, which is where international institutions can offer their online platforms to assist in knowledge dissemination. Moreover, the pandemic has exposed societal divides in some contexts and vulnerable segments of the population need to be protected.