



**Organisation Internationale
des Sciences Chimiques pour le Développement
International Organization
For Chemical Sciences in Development**

Statement

**Action and delivery for sustainable development:
Solidarity, preparedness and listening to the science are
vital in the ‘critical decade’**

Introduction

The 2020s have been characterised as a ‘critical decade’ for sustainable development. It is the decade during which effort must be ramped up to unprecedented levels if the ambitious UN Sustainable Development Goals (SDGs) are to be achieved and the world is to withdraw from overstepping planetary boundaries and interconnected tipping points – catastrophic changes in the Earth System from which it will take thousands of years to recover. UN leaders have warned (<https://www.un.org/press/en/2019/ga12131.doc.htm>) that “*we are the last generation that can prevent irreparable damage to our planet*”.

Despite the setbacks it is creating, the Covid-19 pandemic provides a great opportunity to strengthen international resolve, cooperation and action towards achieving a sustainable future. This Public Health Emergency of International Concern (PHEIC) is the biggest global health crisis that the digital age has seen so far. But its impacts may be dwarfed by those of many other emergencies and crises that are predicted to arise in the coming years if the world remains on its present course. These include not only other health emergencies (such as pandemics of even more dangerous pathogenic organisms and the spread of antimicrobial resistance in bacteria), but also the impacts of global warming/climate change on health, economies, agriculture, adverse weather events, lowland inundations and species extinction, as well as global shortages of food and fresh water.

The worldwide attention now given to the Covid-19 pandemic creates a window of opportunity. The impacts and unprecedented global responses already seen demonstrate a fact known for years: (1) the world is vulnerable to a number of inter-related threats that can wreak disaster and can only be averted by massive, collective effort; and (2) those who claimed that the world could not afford to avert such complex and large-scale threats as climate change and pandemics have miscalculated – the costs of dealing with the impacts of such events are even greater. The world cannot afford *not* to act.

Learning from Covid-19

Lessons from Covid-19 can help to further invigorate efforts to achieve sustainability for people and for the entire planet. **Three lessons, in particular, are of central importance:**

1. The sustainable development goals are all interconnected: International solidarity is the key. Like many other challenges of sustainable development and planetary sustainability, the Covid-19 pandemic (a) does not respect borders; (b) has major consequences that reach far beyond the sector in which it began; and (c) has been met, in some places, with short-term measures based in local or sectional self-interest rather than in the spirit of mutual assistance that is essential to long-term solutions.

In the middle of the pandemic, attention tends to focus on the immediate threats to life, on the scramble to source and deliver sufficient supplies of personal protection equipment and ventilators to local constituencies, and on the enormous world-wide economic effects (https://www.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2019/issue-2_7969896b-en) – an ‘economic contagion’ – already being felt as a result of lock-downs and suspensions of activities across wide-ranging fields including business, education, hospitality industries, manufacturing and travel.

Looking ahead, fears are mounting that hundreds of millions of people will be pushed into poverty, that widespread hunger will result from interruptions in agriculture and trade in its produce, that humanitarian crises in parts of the world in conflict and post-conflict settings will be made worse, that human rights restrictions being imposed or tightened during the response to the pandemic will be extended when the pandemic is gone, that hard-won gains made in equality, diversity and inclusion will be rapidly eroded and slow to recover, that democratic institutions and norms will suffer, and that the principles and practices of international cooperation that have been built up since the end of World War II may be giving way to a new era of national self-interest weakening of mutual support and solidarity.

The Covid-19 pandemic illustrates one of the tenets that are central to the UN SDGs: the sustainable development goals are all interconnected and addressing each of them requires attention to all of them.

Practical solutions can only be found through international cooperation and solidarity, which is difficult to begin putting in place when an emergency has already started. It is essential that countries strengthen mechanisms for international cooperation that already exist – including those of the UN and its specialised agencies – and add new ones where they are lacking.

2. Preparedness is the best vaccine to avert disasters that are avoidable and minimise the impact of those that are not.

There have been repeated warnings of the likelihood of a major pandemic. While the International Health Regulations were strengthened in 2005 after SARS, implementation has been inadequate and in 2019 the Global Preparedness Monitoring Board reported that the world was ill-prepared for a pandemic (https://apps.who.int/gpmb/annual_report.html), observing that “*The world is at acute risk for devastating regional or global disease epidemics or pandemics that not only cause loss of life but upend economies and create social chaos*”.

Other sectors are equally stark in their warnings, e.g. in relation to global warming, shortages of food and clean water and biodiversity loss. The point at which emergencies are declared and crisis actions initiated may happen at varied times in the future for each of these – but by the time this point is reached, it will be too late to avert much of the harm caused to people’s health, wellbeing and livelihoods.

It is essential that countries recognise their responsibilities, individually and collectively, for averting these multiple, unfolding crises and ramp up their action now. Strenuous efforts to achieve the UN SDGs in the present decade will be an essential first step on the longer road and a vital sign that countries intend to take decisive and effective action to achieve sustainability and to preserve, protect and enhance human security through adequate preparedness.

3. Listen to the science.

Scientific evidence, advice and innovation are essential at every stage of the responses to existing emergencies and the preparedness for new ones. The identification of potential future threats, establishment of sensitive and timely monitoring systems, development of strategies and technologies to try to avert crises and of tools and procedures to deal with them when they do occur are key contributions that science can make. These contributions can only be effective when policy-makers are willing to listen and willing to adopt the solutions that are proposed by science, which at times may be expensive or run counter to favoured political positions.

Science skills and capacities cannot be created overnight, nor can effective, trusting relationships between scientists and policy-makers be built quickly in the midst of an emergency. They require

long-term support to be developed into effective machineries and regular operation of advice and consultation mechanisms to keep the machinery well-tuned and ready for all eventualities.

Recommendations

The IOCD action group, *Chemists for Sustainability* urges the UN and member countries to draw strength from the lessons of the Covid-19 pandemic and to apply the learning that:

- (1) International solidarity is the key to achieving the interconnected UN Sustainable Development Goals and longer-term global challenges to sustainability. Both during and in the aftermath of Covid-19, Members States must provide increased political and financial support to the UN and its specialised agencies, including the FAO, UNDP, UNEP, UNESCO, UNICEF and WHO and make greater efforts to put global concerns ahead of national interests to ensure effective collective action to meet these challenges. These organizations need to be given the flexibility and authority to act in the collective best interests and not be hobbled by self-interests of a minority of powerful members. The build-up and maintenance of these mechanisms must be sustained when the immediate crisis has passed, so that the world is better prepared for the next challenge, in whatever sector it originates.**
- (2) Preparedness is the best vaccine to avert disasters that are avoidable and minimise the impact of those that are not. Covid-19 has taught that, to preserve life and avoid the collapse of health systems, ‘flattening the curve’ of the pandemic is essential. It is vital that this lesson is applied to all other areas, including climate change, poverty, hunger, and shortage of clean water, to avert other looming emergencies. Advance preparation – including of policies, systems, materials and skills – is required and necessitates political commitment, financial support and positive communication to ensure societal buy-in.**
- (3) It is essential to listen to, and be led by, the science. Vital conditions for effective, science-based responses include (1) ensuring a well-supported, broad base of science, technology and innovation at country level, so that expertise and capacity are on hand when emergencies arise; and (2) developing a culture of respecting and using science advice, so that both policy-makers and scientists have a habit of productive interactions and a platform of trust on which to base their engagements in both regular and emergency settings.**

Alain Krief, Henning Hopf, Goverdhan Mehta, Stephen A. Matlin, July 2020

About us

The mission of the International Organization for Chemical Sciences in Development (IOCD) is to promote the pursuit and application of the chemical sciences for sustainable, equitable human development and economic growth, through repositioning chemistry as a science for the benefit of society and promoting the role of the chemical sciences in sustainable development. The IOCD action group C4S (<http://www.iocd.org/WhatWeDo/Current/sustainability.shtml>) (*Chemists for Sustainability*) focuses on the role that chemistry must play in contributing to a more sustainable future (<http://dx.doi.org/10.1038/nchem.2389>). The group has emphasised (<http://rdcu.be/hBr6>) the need for chemistry to adopt systems thinking (<http://www.iocd.org/Systems/intro.shtml>) and cross-disciplinary working (<http://www.iocd.org/OWC/approaches.shtml>).

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