



EDITORIAL TIBOR TÓTH EXECUTIVE SECRETARY

For a brief moment at the end of September, astronomers challenged our sense of cosmic entitlement when a planet that may contain water, the font of life on Earth, hove into the view of powerful telescopes.

It was inevitable that after looking afar our gaze would turn homeward. Regrettably, it's hard to overlook the fact that our own small blue orb in the vastness of space harbours within it the seeds of its own destruction: nuclear weapons left over from a conflict that elapsed two decades ago.

Gliese 581g, a so-called Goldilocks planet, neither too hot nor too cold and 20 light years from Earth, may harbour life no more exciting than duckweed and algae. Yet its discovery is a looking glass; all travellers arriving upon new wonders inevitably view them through the prism of what's familiar – the touchstone of home.

Our view of Earth is occluded by more than 20,000 nuclear weapons that continue to have the potential for our annihilation. It is such an extraordinary anomaly that we'd be hard pressed to explain it to any denizens of Gliese 581g.

Which goes to the nub of the current debate about nuclear weapons – why do we retain them and what security do they offer?

My answer is that they are a dangerous liability. Mutually assured destruction defined the stalemate when two armies bristling with nuclear weapons confronted each other across the plains of the Cold War. The danger of such a war may have receded but as long as nuclear weapons exist, the risk of regional nuclear war or accidental use remains, as does the spectre of terrorists getting their hands on them.

Albeit slowly, we are beginning to acknowledge our liabilities and devise new ways of eliminating nuclear weapons. Such wisdom is gaining increasing support, from grassroots movements to former statesmen to world leaders. Greater efforts to inform an often unsuspecting public that it is sitting on a nuclear powder keg will also yield exponential results.

So far we've avoided World War III: the opportunity now exists to eliminate the weapons it would have been fought with. The forums and legal instruments that will be required to complete the task are in place.

However, we must proceed on the basis of Murphy's Law: that whatever can go wrong will go wrong.

It's pretty clear though where our next steps must take us. In New York in May nearly 190 States Parties of the Nuclear Non-Proliferation Treaty (NPT) spelled these steps out at their five yearly review meeting. Building on the groundswell of opposition to nuclear weapons, they committed themselves to a world free of them.

I cannot claim that all nuclear challenges can be resolved solely through multilateral treaty regimes – but they certainly cannot be resolved without them.

Cheaters will challenge the system and problems will emerge that require innovative responses. Yet treaties are measures of legitimacy, accepted norms for international cooperation.

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is an instrument for nuclear non-proliferation and disarmament whose ratification is the obvious next step to take. It could serve as a regional confidence- and security-building measure in regions such as the Middle East and Asia. It's a practical tool whose time is now.

It provides a firm legal barrier against nuclear testing, thereby curbing the further development of nuclear weapons by nuclear and non-nuclear weapon States alike. It also sets new legal and verification standards for nuclear weapons since it contains the same rights and obligations for everyone.

The articles in this issue of Spectrum are from a diverse range of voices: former U.S. Republican Senator Jake Garn of Utah; Lieutenant General Talat Masood, former Secretary for Defence Production in the Ministry of Defence, Pakistan; Dr Bharath Gopalaswamy, formerly of the Indian Space Research Organization, now at the Stockholm International Peace Research Institute (SIPRI); and Professor Xia Liping of Tongji University in China, all giving support to the CTBT and its verification regime.

A collection of points of view from such a varied landscape sets a new precedent for Spectrum and I sincerely welcome these thoughtful and timely contributions provided by their respective authors.

Of course it's up to every single State, each driven by the demands and priorities of its own domestic agenda, to draw its own conclusion about the appropriateness of committing to the Treaty.

Nonetheless, I am reminded that dialogue was the first step on the path taken that led to the de-escalation of tensions between Cold War foes and their support for arms control.

For it is from the exchange of views and acknowledgement of their commonalities that confidence is built.

The CTBT is a forum for such a process, further supported by a unique Earth-girdling verification regime driven by technology.

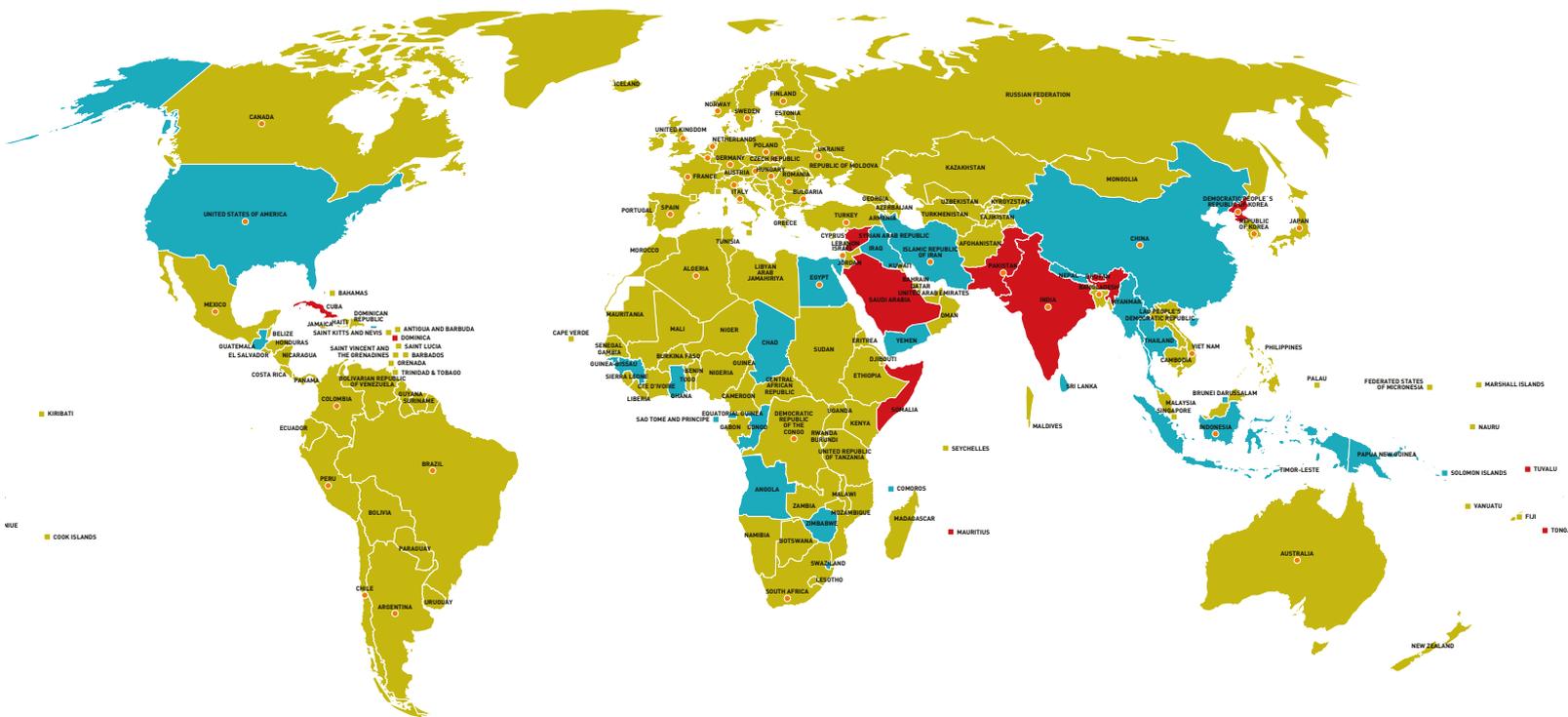
The equipment supporting one of those techniques, the detection of noble gas in an on-site inspection, is elaborated upon by Dr Charles Carrigan of the Lawrence Livermore National Laboratory. A team of scientific experts at the International Data Centre (IDC) of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) highlight the efficiency of the infrasound network. Michel Nambobona,

the Director General of the National Data Centre in the Central African Republic, outlines his personal role in helping to secure CTBT ratification by his nation.

Finally, indulge me, please, if I misappropriate Alexander Pope's famous line. To err is human but nuclear weapons offer no divine forgiveness. So let us celebrate the discovery of Gliese 581g, perhaps the first real success story in our search for "living planets," by ensuring the future of that other "living planet," Earth.



STATUS OF SIGNATURES AND RATIFICATIONS AS OF 27 OCTOBER 2010



| | SIGNATORY STATES | RATIFYING STATES | NON-SIGNATORY STATES |
|----------------------|------------------|------------------|----------------------|
| TOTAL STATES: 195 | 182 | 153 | 13 |
| ● ANNEX 2 STATES: 44 | 41 | 35 | 3 |

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