

## IAEA Regional Offices Study

**Bryce Farabaugh**

Pacific Northwest National  
Laboratory

**Jenn Hart**

Pacific Northwest National  
Laboratory

**Olympia Hunt**

Pacific Northwest National  
Laboratory

**Robert Marek**

Pacific Northwest National  
Laboratory

**Katie Spence**

EastSideWest Consulting, LLC

### Abstract

During the COVID-19 pandemic, the International Atomic Energy Agency (IAEA) had to adapt and draw on all available resources to ensure continued success in its mission, including its safeguards activities verifying nuclear science, technology, materials, and facilities are used strictly for peaceful applications. As an international organization with responsibilities that include providing inspections internationally, the inability to easily travel between states due to pandemic restrictions posed financial and personnel problems, raising questions about the limitations of existing resources and the value, if any, of possessing geographically “distributed” IAEA resources around the world.

In the past, additional offices have been a topic of discussion for the IAEA. Such discussions received little traction and resulted in no changes. However, during the COVID-19 pandemic, across nearly all sectors of the economy, the concept of work location has become increasingly fluid and dynamic. While much of the Agency’s safeguards work will likely require a return to the way operations were carried out pre-pandemic (including on-site inspections and other in-person activities), assessing the viability of new work arrangements and locations could result in opportunities to reduce costs and increase efficiency across the Agency’s operations as well as increase resiliency and flexibility in the face of unpredictable difficulties.

This study explains, in greater detail, the concepts outlined above and provides an overview of IAEA facilities to-date, assesses current trends in remote work and their relevance for the IAEA safeguards mission, and explores options to mitigate potential risks identified. It concludes with the following recommendations:

- Encourage Continued Use of Remote Connectivity Resources
- Leverage Shared Spaces with Other United Nations Organizations
- Evaluate Potential Hybrid Inspector Arrangements.

### Introduction

The global travel restrictions resulting from the COVID-19 pandemic severely restricted the International Atomic Energy Agency’s (IAEA’s) activities and demonstrated the value of having a geographically “distributed” IAEA presence in regions other than Europe. The IAEA currently

maintains two recognized regional offices in Tokyo and Toronto dedicated to Safeguards Implementation. During the pandemic, these offices shouldered much of the verification activities necessary to fulfill the IAEA's safeguards mission. The benefits of these offices are well-documented; however, barriers (both financial and political) to opening new offices are significant.

Of course, many of the drawbacks and difficulties can be balanced and addressed through other means; however, two overt barriers remain to the establishment of additional regional offices on par with Tokyo or Toronto. These are the 1) initial costs to establish, secure, and equip an appropriate office space and 2) political considerations that inherently accompany a highly visible verification organization like the IAEA in establishing a known presence in one country versus alternative countries. The question remains, then, how can the IAEA increase its flexibility to continue operations as the Agency's mission continues to evolve— while minimizing negative impacts and maximizing mission responsiveness— and address these two overarching barriers?

## **Current Status**

The IAEA has a variety of working spaces located throughout the world, including its headquarters (HQ) in Vienna, fully staffed regional offices in Tokyo and Toronto, liaison offices in New York and Geneva, and laboratories in Seibersdorf, Monaco, and Trieste. In addition to these official IAEA sites, the agency also maintains a number of less formal locations for facilitating short-notice activities, inspections, and other safeguards-relevant actions. These other locations range in scope from dedicated suites of offices (not staffed continuously), located on large nuclear sites in a number of countries with advanced fuel cycles (e.g., Japan, Belgium, South Africa, and Republic of Korea) to storage rooms to deposit supplies and equipment in smaller countries that IAEA inspectors can access when they arrive in-country for various verification activities. The drawback of these locations is that they have no resident inspector staff and so, in the event of a worldwide event similar to the COVID-19 pandemic of 2020–2022, the IAEA is still vulnerable to the lack of ability to deploy staff to these locations.

Historically, the IAEA has used other UN facilities and hotels as temporary, informal offices or storage facilities. These have been used as a short-term solution for larger effort activities that may require a longer-term IAEA inspector presence but with expected limited duration. In both Brazil and South Korea, the IAEA has negotiated directly with hotels for long-term rentals to store equipment and act as office spaces. Events such as spent fuel cask loading campaigns or multiple unit reloading campaigns are examples of activities that drive this sort of arrangement.

In places like South Africa, which has one primary nuclear site with an operating and complex nuclear fuel cycle, the IAEA has negotiated the exclusive long-term use of a suite of offices in the same building that houses the State Authority Safeguard staff. Due to the nature of the nuclear fuel cycle in South Africa, the IAEA must send inspectors on-site every month and has no expectation that this regime will change in the foreseeable future. Thus, the exclusive use of such offices on a continuing basis reflects the expected presence on the site and supports the needs of the anticipated inspection regime. This suite of offices includes not only workspace for inspectors (e.g., desks, telephones, office supplies, printers), but also includes a large area for

verification equipment storage, preparation, maintenance, and a work area for necessary inspector activities.<sup>1</sup>

Another example is Aktau, Kazakhstan, where the defueling of the BN-350 reactor in the mid-2000s drove the need for an almost constant on-site presence of IAEA inspectors. Working in pairs and overlapping shifts during the defueling and canning/shipment processes, the IAEA inspectors had a need for workspaces in a local hotel, as well as on-site dedicated and exclusive use spaces for equipment, and areas to carry out verification activities. Thus, the IAEA negotiated space at a local hotel for dedicated use of IAEA inspectors at a favorable rate, which included document printing and internet access. The IAEA also negotiated for exclusive use space and the provision of internet capability on-site at the BN-350 location. This creative hybrid solution worked effectively throughout the defueling and cask loading campaigns, supporting efficient and effective implementation of IAEA safeguards on an extremely complex and resource-intensive activity.<sup>2</sup>

There were similar temporary measure taken to complete verification activities in Iraq in the 1990s and early 2000s with the establishment of the IAEA/UN Monitoring, Verification, and Inspection Commission (UNMOVIC) HQ in Baghdad. As the successor to the UN Special Commission, UNMOVIC worked as a complementary inspection team to the IAEA Iraq Action Team. Both teams remained in Iraq for eight years, using facilities at the Hotel Canal in Baghdad, until a bombing in 2003.<sup>3</sup>

All of these examples and accompanying arrangement descriptions above are what might be called “Fit for Purpose” and should be remembered in this way. There are, of course, many more that are not specifically discussed here. Suggestions for additional or different arrangements that support global activities should be viewed with the same approach. The situation and issues that accompanied the COVID-19 pandemic are not the same as the reasons that drove the arrangements outlined above. In other words, the use of creative Fit for Purpose arrangements—which might be unheard of in the past but make sense as the IAEA mission and the rest of the world continues to evolve— should be considered.

Similarly, the IAEA regularly uses transit states as stop-overs and then sends notification (2- or 24-hour notice) in advance to a neighboring country of an impending short-notice activity. This strategy has been adopted in a number of countries that require long-haul flights to get to. Thus, the IAEA is taking advantage of the commercial airlines’ flights and routing schedules. By doing so, the IAEA can select certain flights that terminate in one state and allow a short hop on a local airline (or train trip or car trip) to the neighboring state the next day for safeguards activities. One example of this known by the authors is inspectors traveling from Vienna HQ to Singapore and stopping after about 15 hours of travel, spending the night in a Singapore hotel near to the airport, and then, the next morning, sending 2-hour notice to a facility in Indonesia of inspection that day. After sending the 2-hour notice, inspectors board a short, 60-minute flight via a local airline to Jakarta and arrive at the facility almost exactly 2 hours after sending the notification from Singapore. This type of planning preserves the surprise element of short-notice activities, while allowing inspectors to travel long distances to the activity in question.<sup>4</sup>

## **The Goal - Increased Global Inspector Presence**

As already mentioned, the establishment of new regional offices on the level of a Tokyo or Toronto Regional office face the two prohibitively high barriers to initial establishment, 1) initial cost to establish, secure, and equip an appropriate office space and 2) political considerations that inherently accompany a highly visible verification organization like the IAEA in establishing a known presence in one country versus alternative countries. In addition, it seems extremely unlikely that these barriers can be overcome in the short-term. There are other options to consider, however, that fall short of being a fully staffed and functional regional office like Tokyo, with all of the infrastructure and staffing. These options require some creativity and, perhaps, a way of thinking outside of what the norm has been since 1971, when the Comprehensive Safeguards Agreement and INFCIRC/153 were first promulgated. There are two different aspects that must be considered in order to successfully increase inspector presence in a more distributed fashion. The first is obviously workspace (and now, in today's world, remote connectivity is an integral part of this), and the second is inspector staffing/manpower arrangements to affect such a presence.

## **Remote Work Scenarios – Status and Considerations**

Over the past several years, concepts such as work location and offices have become increasingly fluid and dynamic, just as we saw difficulties with the current verification regime during the COVID-19 pandemic and the increased reliance on the two regional offices of Tokyo and Toronto to address the inability to get inspectors from the Vienna HQ to verification locations in the field. We also saw an accelerated improvement in remote connectivity arrangements, including file sharing, video conferencing, and secure work collaboration via remote platforms. The pandemic, aside from its difficulties and negatives, had some positive results, as well; one was the prioritization of creating usable, efficient remote work capabilities. Companies, private industry, and all manner of business were driven to create workable options where they did not exist before. Prior to the pandemic, video conferences and meetings were mostly an oddity and a curiosity. Most people did not use them. Now it is a routine expectation that if you schedule a meeting with someone, it probably is or can be a virtual one.

The IAEA, too, moved with speed and precision to create a working and usable remote and collaborative environment to facilitate its continued operation during the pandemic. As a “watchdog” organization, the IAEA is naturally suited to leverage the benefits gained from more dispersed workforces in response to the COVID-19 pandemic. As technology continues to meet the needs of physically distanced staff and new resources supplement previous tasks, such as the relationship between video conferencing and work travel, the IAEA is well-positioned to identify value and benefit from this changing environment and the resulting precedents.

Thus, there is no longer a dogmatic need to have IAEA staff located in an HQ building when the technological results of the pandemic and the creation of a “work from wherever you are” environment has already happened. Further, these changes in work environment and their expectations only continue to change, as now private companies see the need and the benefits of such arrangements and continue to develop and improve products that make them possible.

There are certainly considerations that must be addressed, however, regarding IAEA staff posted away from HQ in Vienna for periods longer and more extended than a typical three-to-four-week

inspections trip, as is now done to some countries. They include such things as loss of connection with HQ and all of the risks it brings in the form of mental health and stress, as well as the obvious management concern of an inspector becoming “too close” to state authorities and facility operators, thus, possibly affecting his/her independence. Also, lack of visibility on a professional level significantly affects some individuals more than others. It is clear that not all inspectors would thrive in such an environment. However, these concerns should not, by themselves, prevent the consideration of alternate arrangements that accomplish a more widely distributed IAEA presence around the globe.

## **Leveraging Available Resources and IAEA Networks**

As discussed earlier, the two basic requirements for increased IAEA presence on a longer-term but temporary or quasi-permanent basis are 1) inspectors and 2) space to accommodate their work activities. Space considerations are of the utmost priority, as resolving issues associated with physical space overcomes (to some level) both of the barriers already identified: prohibitive cost in initial establishment of an office and political considerations of picking one location (i.e., state) over another. The option to leverage already existing space that may be available to the IAEA at reduced and/or subsidized levels needs to be investigated more thoroughly.

Already, the international presence of the IAEA expands beyond the agency’s HQ, regional and liaison offices, and laboratories given the Agency’s global mission. The IAEA also leverages the use of established networks, like the International Network for Nuclear Security Training and Support Centres that is one of 15 networks recognized and promoted by the IAEA.<sup>5</sup> Other, non-safeguards functions of the IAEA (e.g., Nuclear Energy, Nuclear Safety, and Nuclear Security) also have mission-driven reasons to maintain staff in various countries. The benefit of leveraging these resources for the Department of Safeguards is that it would require only a limited amount of internal coordination and agreement of the director general of the IAEA— no external organizations or entities would be involved. The two sides of the IAEA working together also promotes the idea that safeguards and the use of nuclear materials and technology for peaceful purposes go hand-in-hand.

## **Shared Office Possibilities**

An alternative to leveraging IAEA resources is exploring the option to partner with other international organizations that have networks of physical office locations already established.

International organizations, such as United Nations Development Programme (UNDP), UNIDO, World Bank, Food and Agriculture Organization, and World Food Programme, have an expansive and established global presence that could be leveraged through partnership. While there are security considerations regarding shared space, internal sectioning could provide informational distance between organizations. Gaining temporary access to an operational office would provide Department of Safeguards personnel with administrative support and resources in-country, such as document printing and secure shredding, that reduces the amount of luggage that inspectors must transport, in addition to a reduction in security risk of transporting hard copies of potentially sensitive information unnecessarily.

In addition to administrative support, the possibility of access to a physical office outside of the current IAEA framework would have additional relational benefits. When inspectors are in-

country, they often need to meet with the state authority. Having an operational office as a resource would allow them access to meeting space where they could invite state authority representatives. Additionally, an existing office could provide the operational team with a network of contacts, including credible recommendations for medical professionals, interpretation services, and other needs that would be invaluable for staff who might be unfamiliar with the state in which they are working.

All of these organizations listed above, as well as others in the UN family, use the same common United Nations Laissez-Passer (UNLP) for travel and identification purposes. In addition to travel use, the participating organizations, such as the UNDP and the World Bank, also, in many cases, rely on the use of a UNLP as identification combined with the holder's Index Number or Personal Number, which is a unique identifier of UN staff. This allows UNLP holders, in combination with his/her Index Number, to gain access relatively easily to UN offices and locations around the world.

Alternatively, in the private sector, co-working companies provide individual and company partnerships with offices in remote locations. For example, WeWork offers individual memberships ranging from drop-in access to subscription-based all-access passes. For companies, WeWork also offers dedicated areas comprising individual and group offices.<sup>6</sup> This allows for collaborative space solely accessible to those within that company.

Although there are logistical, relational, and security considerations, the reduction in front-end and overhead costs encourages consideration of shared offices space. Additionally, the opportunity to strengthen relationships with other UN organizations and international organizations could be mutually beneficial for respective missions.

### **Stepwise Expansion of Informal In-Country Working Offices**

Allowing the creation of small (even single person) in-country offices seems like a logical and reasonable progression from no presence at all on a continuing basis to a full-fledged Tokyo Regional Office (TRO)-style situation. As already introduced, the IAEA currently benefits and can benefit further from satellite offices. In further expansion, if there is continued interest in satellite offices, the IAEA should consider a prioritized list of locations based on fuel cycle activity, workload (now and projected), regional shared borders in each location, and an analysis of travel modes between bordering states and cooperation of state authorities for such things as inspector visas that would allow longer residence times and not conflict with national immigration or residency laws as they exist now. Where the best locations are identified, this increased presence is for the IAEA to establish. But in doing so, the IAEA not only must look at the things outlined above (e.g., nuclear fuel cycle activity and projected workload), but also have a long-term strategy to grow the presence should it become prudent to do so.

### **Inspector Experiences and Staffing Considerations**

The concept of remote work was not unfamiliar to the IAEA prior to the COVID-19 pandemic. IAEA safeguards inspectors spend much of their time in the field and traveling between nuclear facilities and locations. On average, a P-3 or P-4 inspector spends between 100 to 140 days a year in the field and away from IAEA HQ in Vienna. While away from HQ, a significant portion of their roles and responsibilities still fall under a timely reporting requirement. Although written

and verbal reports are primarily required after inspections, IAEA inspectors often travel from one site to the next in a series of inspections. A typical inspection trip to Japan, for example, is usually 24 days long and may include inspections at 10 to 12 facilities during that time. This results in many staff writing and submitting reports from locations other than Vienna, usually utilizing their hotel rooms as offices. Thus, the IAEA had invested in technology and equipment years before the COVID-19 pandemic to allow inspectors to connect to HQ in Vienna via a secure Virtual Private Network (VPN) in order to upload reports into the computerized inspection reporting database and also to download necessary working files, such as Facility Status Reports and Nuclear Material Inventories. Given the need for consistent and reliable connection with the home office, the IAEA often provides inspectors with contract phones and mobile Wi-Fi hot spots during inspection trips to facilitate connection via VPN, even if commercial Wi-Fi internet is not available. This experience can be leveraged and used to form the basis of some hybrid options, which can increase inspector presence in-country on a regular and continuing basis.

The IAEA Safeguards Operations divisions divide the world by geographic area. Thus, some sections and divisions cover parts of the globe that are distant from HQ in Vienna (e.g., Japan, Australia, and South Asia, Oceania, South America) while others cover a closer geographic region (e.g., Europe, Scandinavia, and Former Soviet Union). The inspectors in divisions covering Japan et al. end up having much longer trips for the sake of efficiency in travel costs and similar considerations but have fewer trips per year. In contrast, inspectors in divisions covering Europe may only travel three to five days on an individual inspection trip but make 30+ trips per year. Normal and current travel rules for inspectors limits the length of duty trips to 26 days maximum without the express approval of the director of the operations division in which the duty travel falls. Similarly, duty travel scheduling rules require an inspector to have one day of rest for every seven days on duty travel. During normal times, these rules are almost always adhered to, with very few exceptions.

Another key point is that the limits outlined above, of 26 days maximum and one rest day for every seven working days, are relatively new rules. In the mid-90s, trips for inspectors carrying out routine inspections in Japan were 35 days, on average, and sometimes longer. Intervention of staff council on behalf of the inspector working conditions advisory group to the Deputy Director General of IAEA Safeguards recommended limiting length of trips to increase staff morale and welfare, especially those with young families. It must be remembered that, during this time, remote connectivity, smart phones, and related technology did not exist. Email was only available in the TRO and not in hotels or elsewhere. Other connections back home simply were not available in most places.

During the COVID-19 pandemic, these rules also did not apply and temporarily were suspended due to the unprecedented nature of the situation that Safeguards Operations found itself in. IAEA safeguards inspections did not stop during the pandemic, although additional requirements due to national emergency lockdown approaches needed to be addressed. In many places, an additional two weeks of quarantine for inspectors arriving in the country was added to the duty trip timeline. Further, because of the lack of commercial airline flights and the significantly increased cost for those flights that did exist, duty trips were extended to five or six weeks, in some cases. The logic was that once the investment in time and money to get an inspector into country had been made, it was desirous to take full advantage and have that inspector carry out as much as

possible in-country regarding nuclear material verification and facility inspections. Thus, in some cases, inspectors were away from Vienna HQ for two months or more at a time. It was admirable that the Safeguards Department management never overtly imposed this type of trip on inspectors, and such trips were taken voluntarily. Each trip was discussed at section meetings, and usually more than enough inspectors would volunteer to go, thus, removing the pressure on management to draft an inspector for such trips.

Clearly this approach is not the system that the IAEA had embraced pre-pandemic; however, it was necessary to adopt due to the situation at hand. Further, it demonstrated that many of the arguments used by both management and staff to limit the length of individual trips for inspectors were not necessarily firm or absolute.

For some staff, the limit on duty travel lengths and similar considerations are necessary for their own well-being and that of managing family commitments and relationships at home. However, many inspectors thrive on longer trip lengths and are happy to function in a workplace regime where they might be away from home two or three months at a time.

Management concerns on the length of inspector trips are a bit more challenging. Some IAEA senior management worry that long stays in-country subject IAEA inspectors to pressures that can lead them to lose their impartiality with regard to the state in which they are working. This concern is not unreasonable but perhaps is exaggerated. Inspectors who now are making these trips to Japan or to South America usually make five or six trips a year to the same place due to the nature of the operations divisions setup and the way they carry out safeguards verification in assigned countries. In most sections, the same inspectors travel to the same states and facilities, time after time, and the concern over losing impartiality is discounted. In places where this is a real issue, the internal rotation policy of moving inspectors between operations divisions on a periodic basis (about five to seven years) is one way management can and has responded.

For all of these reasons, one can assume that, if an increased presence on a continuing basis is desired in a country or a region, the use of extended duty trips for one or two inspectors is possible. It would allow IAEA inspectors to “reside” in a country and carry out inspection and verification activities, as required, without the need for travel to and from Vienna HQ for specific activities.

## **Conclusions**

The barriers identified in this study (including both financial and personnel costs) to the establishment of a wider geographic presence of IAEA inspectors on an ongoing basis can likely be overcome with a combination of creative thinking in the areas of workspace arrangement, remote connectivity, and inspector assignment and deployment. Such improvements will likely require changes in management approaches regarding inspector assignments, negotiation with inspector staff to achieve mutually acceptable situations for extended travel, and shifts in approach to workspaces and/or remote connectivity. These changes may encounter pushback from some stakeholders, both inside and outside the IAEA, but opposition is not necessarily guaranteed, and differences of opinion can likely be overcome to identify mutually beneficial arrangements for all involved: for example, the IAEA reacted quickly and decisively when the COVID-19 pandemic suddenly changed the paradigm of operations that the IAEA had been working with for many



years. The project team proposes the following recommendations to address current and future developments likely to shape IAEA safeguards activities in the years to come:

1. **Encourage Continued Use of Remote Connectivity Resources** – The widespread adoption of remote connectivity, secured video meeting capabilities, shared drives for document sharing, and other collaborative working tools allow people who are physically distant from each other to interact and be as productive as if they are sitting in the same room. A precedent has been set during the COVID-19 pandemic, but it is up to IAEA leadership whether continued use of existing tools and future resources resulting from technological advances will be encouraged. The project team encourages continued adoption of such capabilities in order to reduce/eliminate costs associated with unnecessary travel, provide positive working conditions for current employees, and attract high-quality prospective employees, given remote work trends in private sector employment.
2. **Leverage Shared Spaces with Other UN Organizations** – As outlined in this paper, the IAEA has sought out varying space arrangements to meet varying unique needs in the past. Although these arrangements of the past do not provide identical solutions for the needs of today, the creativity and agility of such an approach is a valuable guide for leadership. Creative options for office space could include partnerships with other IAEA departments. Similar to the way that IAEA facilities in Seibersdorf hosts laboratories for other organizations, the opportunity for the IAEA to leverage existing (or establishing new) relationships with other UN-based organizations could result in mutually beneficial space sharing. Finally, although more logistically challenging, the option to branch out beyond UN organizations to partner with the private sector, either through international organizations that already have a global physical presence or through dedicated co-working businesses, provides a potential solution that lowers barriers to location entry. The project team recommends additional research exploring the plausibility of each of these potential arrangements.
3. **Potential Hybrid Inspector Working Arrangements** – Alternatively, if the option to expand brick-and-mortar presence is not yet feasible, there is a possibility of expanding the presence of the IAEA’s human capital beyond Vienna. Rather than having an in-person inspector workforce that traveled from Vienna, the project team assesses that, post-pandemic, leadership and staff would likely be more amenable to a hybrid arrangement for inspectors. This would allow IAEA inspectors to be posted at locations around the world with the goal of maintaining inspector presence at those locations and to work remotely, with regular check-ins at HQ, to maintain relationships and attend required trainings. Although such an arrangement may encounter some resistance initially, primarily due to the concern of inspectors developing biases in favor of their service locations, it is important for decision-makers to recognize the many biases that inspectors already bring to their jobs through their citizenships and experiences. With intentional human resource and management acknowledgment that this arrangement could potentially influence inspector judgment, such risks could be mitigated and equalized through training and engaging management. The project team recommends additional research on the plausibility of this arrangement and potential outreach with IAEA staff and leadership—including both surveys and interviews—given the potential disruption such an arrangement may initially pose to standard practices at the IAEA.

## Acknowledgments

This paper is based on work sponsored by the DOE/NNSA Office of Nonproliferation and Arms Control, whose support is gratefully acknowledged.

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<sup>1</sup> Firsthand knowledge by contributor R.J. Marek, Former IAEA-Safeguards Country Officer for South Africa 2014–2019.

<sup>2</sup> Firsthand knowledge by contributor R.J. Marek, Former IAEA Safeguards Inspector. Member of BN-350 Defueling Team 2006–2010.

<sup>3</sup> Garry B. Dillion, “The IAEA in Iraq: Past Activities and Findings” (IAEA Bulletin, 44/2/2002), <https://www.iaea.org/sites/default/files/publications/magazines/bulletin/bull44-2/44201251316.pdf>.

<sup>4</sup> Firsthand knowledge by contributor R.J. Marek, Former IAEA-Safeguards Country Officer for Singapore and Alternate Country Officer for Indonesia 2010–2014.

<sup>5</sup> “IAEA Networks.” Text. IAEA, July 11, 2018. <https://www.iaea.org/services/networks/listing>.

<sup>6</sup> WeWork. “Office Space for Rent - Pricing & Membership Plans.” WeWork. Accessed August 22, 2022. <https://www.wework.com/solutions>.