

Bulletin of the Atomic Scientists

Interview: Mohamed ElBaradei

After three terms, 12 years, and countless unprecedented challenges, the IAEA can't help but be changed by its outgoing director-general. Three months before Mohamed ElBaradei leaves office, he explains how such an evolution is only a start.

WHEN MOHAMED ELBARADEI BECAME DIRECTOR-general of the International Atomic Energy Agency (IAEA) in 1997, no one thought he would emerge as a transformative leader or that he would catapult the narrowly focused U.N. technical agency to international prominence. But 12 years later, as ElBaradei's tenure comes to a close, he leaves the agency with an expanded and assertive mission—in nuclear verification, nonproliferation, and disarmament.

He is a strident internationalist at heart. To wit, in his 2005 Nobel Peace Prize acceptance speech, he explained, “[Poverty, disease, terrorism, organized crime, and weapons of mass destruction] are ‘threats without borders,’ where traditional notions of national security have become obsolete. We cannot respond to these threats by building more walls, developing bigger weapons, or dispatching more troops—quite to the contrary. By their very nature, these security threats require primarily multinational cooperation.”

And so, his years as the IAEA's leader have been defined by a push for diplomacy over military intervention and a concern for how poverty and violence contribute to proliferation. Not surprisingly, this worldview hasn't always proved popular among the IAEA's member states—the very constituency that support and fund the agency's activities. So despite ElBaradei's achievements, the IAEA budget has remained stagnant—even with added responsibilities—and an ever-growing schism between its members has made consensus—once an agency hallmark—difficult. From his Vienna office, ElBaradei ruminated on these challenges, his time as director-general, and the ambitious future he envisions for the IAEA.

IT IS 5 MINUTES TO MIDNIGHT

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BAS: U.S.-Russian negotiations seem to have gotten off to a promising beginning. After a follow-on to START is completed, what's the next step toward a nuclear-weapon-free world?

ELBARADEI: First, there's been a serious sea change in Washington. I didn't think that I'd live to see the day, but fortunately, we've seen the United States completely turn around. So I can leave the IAEA with a good deal of satisfaction that we're on the right track. And frankly, a lot of this started with [former U.S. Secretary of State Henry] Kissinger and [former Secretary of State George] Shultz, neither of whom could be termed "card-carrying liberals" or "idealists." But they understood that the concept of nuclear deterrence has been rendered completely irrelevant. Nor were they alone. A lot of people in and out of the security field were coming to the same conclusion—nuclear deterrence wasn't the way to move forward. All of them recognized that the mere existence of nuclear weapons exponentially increased the risk that they'd end up being used either intentionally or unintentionally.

The current U.S.-Russian arms control talks begin to move us in that direction. As the saying goes, "Just because we can't see the top of the mountain doesn't mean we should stop the climb." Hopefully, those talks will be quickly supported by ratification of the Comprehensive Test Ban Treaty. Because if you're really serious about disarmament, you should stop testing nuclear weapons.

BAS: How and when do we move from bilateral arms control to multilateral disarmament?

ELBARADEI: I've been saying for awhile that a multilateral approach is necessary for total nuclear disarmament. For example, if you're not going to produce nuclear weapons, you shouldn't have any problems with the whole nuclear fuel cycle being under multinational control. Such a system provides a choking point that prevents any new nuclear weapons from being created. Beyond that, at some point, probably when the U.S. and Russian arsenals fall to 500 or 1,000 warheads, the other seven nuclear states [Britain, France, China, Israel, India, Pakistan, and North Korea] have to begin to disarm as well. From there, the conversation obviously needs to be about how to go from there to zero.

BAS: What does zero look like?

ELBARADEI: Well, we'll need to devise a system that can detect and respond to a cheat. And it would be best if people started working on that now. Skeptics, of course, say that this is impossible, and that a complete change in geopolitical relationships will have to take place first, which is true. But change won't happen by itself.

We'll also have to address the linkage between poverty and violence and between festering conflicts and nuclear weapons. People don't develop nuclear weapons for the sake of developing nucle-

ar weapons. It starts with a lack of good governance and conflicts that are left to fester, which devolves into people feeling marginalized. Soon after, a regional war usually starts, and the warring factions talk about ethnic and other differences. Throughout all of this, frustration builds, and temptation grows to develop nuclear weapons

for protection, parity, or dominance.

That's what's happened the last 60 or so years in the Middle East, South Asia, and on the Korean Peninsula. So we shouldn't be surprised that some of the countries in those places have developed nuclear weapons. Unfortunately, we live in a world where nuclear weapons are regarded as the supreme guarantor of security. Look at NATO's security concept. It glorifies nuclear weapons. As such, I recently told them that they're sending the wrong signals.

It's great that [U.S. President Barack] Obama is talking about a nuclear-weapon-free world, but the rest of the world has to feel confident that such a policy won't end with his administration. Only then will we be in a different position in terms of nuclear wannabes.

That's why a road map to zero is important. It's great that [U.S. President Barack] Obama is taking these arms control steps and talking about a nuclear-weapon-free world and new approaches to regional and global insecurity, but the rest of the world has to feel confident that such policies won't end with his administration. Only then will we be in a different position in terms of nuclear wannabes. They're not going to cooperate just because the United States says, "Okay, now we're serious about disarmament and about a new system of security." They need to see concrete actions that show that Washington actually is dedicated to these new policies.

BAS: How much disarmament by the nuclear weapon states will be required before the non-nuclear weapon states begin to believe that disarmament is a reality, and they might be willing to have constraints placed on their rights—such as enriching uranium?

ELBARADEI: If the United States and Russia go down to 1,000 warheads a piece and they begin to accelerate the dismantlement of their other warheads—because we still have a lot of non-deployed warheads lurking out there—then I think it's legitimate for the non-nuclear weapon states to take parallel steps to strengthen nonproliferation. This also is contingent upon getting the United States, Russia, and the other nuclear weapon states to vow not to modernize their arsenals and to agree upon a road map to zero. If those conditions are met, I don't see how you wouldn't be able to get a multinational approach to the nuclear fuel cycle.

Today, a multinational approach to the fuel cycle isn't a reality. And it isn't because of technical or legal hurdles. The basic problem is mistrust. The non-nuclear weapon states don't understand why

their hands should be tied when it comes to nuclear technology, while the nuclear weapon states continue to have a free hand. But if the nuclear weapon states make a good faith effort to disarm, I don't see why Brazil, Japan, or any other country wouldn't accept new nonproliferation measures.

BAS: At the moment, what kind of scheme for multinational fuel banks can remain free of politics?

ELBARADEI: It really depends on how the euphoria about nuclear disarmament moves. If it's a serious movement and things trend in the right direction, everybody should be able to agree on the establishment of regional enrichment centers or on empowering the IAEA to manage a fuel-bank system. That's reform politics. Then the questions become logistical in nature—e.g., how many enrichment centers do we need around the world?

I envision the regional centers being jointly managed by the participating countries. That helps make them free of politics. Take, for example, the multilateral enrichment facility that [German Foreign Minister] Frank-Walter Steinmeier is proposing. As a partial owner, you would be guaranteed all of the fuel you need and no one country would have control alone over an enrichment facility. Another option is to have the IAEA manage the fuel banks, with the director-general authorized to release material based on apolitical criteria that are agreed to in advance by the states. To me, it's a question of how high governments want to rise above their narrow national policies and understand that they need to work together in an equitable universal system, which, in the end, will provide them with the most security.

BAS: What is the role of the IAEA in persuading countries to forgo weapons development or to disarm?

ELBARADEI: We can play a lot of roles. Although, frankly, what role we play depends largely on what role our member states want us to play. We'd need a lot more resources and a lot more technology, but we're the natural choice to verify a Fissile Material Cutoff Treaty because what we'd be doing under the cutoff treaty is what we're doing today—verifying reactors and enrichment and reprocessing capabilities. Even in some of the bilateral arms control agreements, I don't see why we couldn't be involved in the verification process.

It really goes back to a fundamental question: Do governments want international agreements and regimes, or do they want bilateral and regional regimes? I happen to believe that the problems the world faces today—arms control, extremism, climate change, cyber security, avian flu—cannot be dealt with on a national or regional basis. And yet, there's a pervasive feeling among many countries that international problems are best solved nationally. To change this mentality, you need people to lead the way. The problem is

that the world currently is short of leadership and vision. We have a glimmer of hope with the Obama administration; hopefully, that will prove contagious, and we'll see similar leaders come forward from the North, South, East, and West.

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BAS: But won't a more assertive IAEA cost more money—something the member states seem reluctant to give it?

ELBARADEI: To answer this question, I always give Iraq as an example. The United States spent \$3 trillion to come to the same conclusion we came to before the war for something like \$5 million. The United States spent \$3 trillion! All the while, we've been told for the last two decades that our budget would need to remain more or less stagnant. Recently, I went to the IAEA Board of Governors to ask for a 16-percent budget increase. I told them, "It's your prerogative to decide the levels of our budget. But it's my responsibility to explain to you the implications if we don't receive the resources we need. And if we don't get more money, we won't be able to deliver credible safeguards or maintain a high level of nuclear safety or strengthen physical protection of nuclear material."

BAS: Some have suggested a small tax on nuclear kilowatt hours as a means of raising more money for the IAEA. For instance, as little as \$0.001 per kilowatt hour—roughly 0.1 percent the cost of power generation from a new nuclear plant—would raise roughly the equivalent of the IAEA annual budget. Would you support such a tax?

ELBARADEI: Candidly, I think an international organization being told by its members to look for nontraditional modes of financing simply is an example of those members displacing their responsibility. They tell us that they don't want a terrorist organization to procure nuclear material or nuclear weapons; they tell us that they don't want to find another secretive nuclear program such as the one Iraq had in the late 1980s and early 1990s; and they tell us that they don't want another Chernobyl. But when it comes to money, we're told, "The treasuries in our countries say that we don't have any." Again, that's their prerogative, but I'm not going to mislead the world and promise to do all of these things that we simply cannot accomplish with our current budget.

BAS: Is this the most significant challenge your successor, Yukiya Amano, will face?

ELBARADEI: It's one of them. Because as much as we've accomplished, there's a lot to do. For instance, there's the expected expansion of nuclear power, and the safety, security, and nonproliferation

issues it will bring with it. More specifically, some countries are pursuing a nuclear power program without yet having the attendant infrastructure. The IAEA doesn't have the legal authority to tell them they need that infrastructure, but I would hope they'd listen to us as a moral authority to ensure that their nuclear programs develop in a responsible way. Plus, there are still many old reactors throughout the world that are receiving life extensions. We need to make sure we have the capacity to conduct peer reviews of these extensions and that they comply with safety standards.

In terms of building up the capabilities to verify something like the Fissile Material Cutoff Treaty, we need to receive better satellite imagery, which sometimes I get and sometimes I don't get depending upon the policy objectives. To do it well, you really need to have a U.N. Satellite Agency, something the French proposed 30 years ago. That would allow us to receive satellite imagery in a predictable and objective way. We also need a state-of-the-art laboratory for environmental sampling analyses. Having such tools is crucial to our impartiality, independence, and credibility. We have to be self-sufficient. Otherwise, I can't in good conscience go to the board and say, "These are the facts. These are the conclusions." Another challenge will be conducting verification in the United States, Russia, China, and the other weapon states. None of those countries are used to the IAEA being there and asking questions. In short, in all of our work, we need more legal authority, more state-of-the-art technology, and more resources.

BAS: There has been some talk from outside experts about the IAEA developing its own intelligence capability. Is that something you're in favor of?

ELBARADEI: I'm much more comfortable relying upon technical means. It isn't realistic for an international organization to have an intelligence branch. That said, the IAEA does need the information and the capability to analyze it and distinguish information from misinformation. Particularly after what happened with Iraq, people have come to realize that we can make a difference between pursuing war or peace. So what we really need is an analytical capability once we receive information. That way, we can determine the authenticity of the intelligence being presented.

It would help, too, if states shared their human intelligence with us—and with the country they're accusing of violating its nonproliferation obligations for that matter. In many cases, they say they cannot because they must protect their sources and intelligence-gathering methods. Yet, probably because I'm a lawyer, that goes against my core principles. I don't see how you can accuse someone of something without showing them the evidence. We have to apply due process and not a Kafkaesque process. That's why I'm against

the IAEA getting into the intelligence business. Having our own spies going around the world is contrary to our nature. We do our work aboveground; we don't work underground. So I continue to preach transparency.

BAS: Tell me how you see nuclear energy developing in the future.

In recent years, a lot of people have talked about a nuclear renaissance, but I've never used that term. Sure, about 50 countries were telling us that they wanted nuclear power. But how many of them really would develop a nuclear power program? It's one thing to talk about nuclear power; it's another thing to actually move forward with a program.

ELBARADEI: In recent years, a lot of people have talked about a nuclear renaissance, but I've never used that term. Sure, about 50 countries were telling us that they wanted nuclear power. But how many of them really would develop a nuclear power program? Countries such as Turkey, Indonesia, and Vietnam have been talking about building nuclear power plants for 20 years. So it's one thing to talk about nuclear power; it's another thing to actually move forward with a program.

Now, there are some countries that are increasing their nuclear power capabilities exponentially. Here, I'm thinking of China and India. Yet, I've also seen South Africa slow its ambitious nuclear plans because of the financial crisis. A reactor costs \$4 billion or \$5 billion—that's a lot of money for small countries.

BAS: How else has the global economic downturn affected plans for nuclear energy development?

ELBARADEI: The jury is still out. Obviously, nuclear power is expensive and finding financing for it is never easy. So while nuclear might be economical in the long-term because of the price of oil and gas, it's hard to secure the upfront costs.

What's sad is that many developing countries, such as Nigeria, need all the energy they can get their hands on—hydro, renewables, and yes, nuclear. I've been to Nigeria, and the average Nigerian has only about 70 kilowatt hours of energy available to them. That's less than what you use to power your laptop and is only about 1 percent of the Organisation for Co-operation and Development average. How is Nigeria going to develop with that energy output?

Nuclear energy, of course, isn't a panacea. In fact, I never preach on behalf of nuclear energy. The IAEA says it's a sovereign decision, and we provide all of the information a country needs. But if a country does decide that nuclear is going to be part of its energy mix, then we come in with the full force of the law to make sure that country does so in a way that maximizes the benefits and minimizes the risk in terms of safety, security, and nonproliferation.

BAS: Is Iran minimizing the risk of its nuclear program—namely by keeping it purely civilian-oriented?

ELBARADEI: We have not seen concrete evidence that Tehran has an ongoing nuclear weapons program. But somehow, many people are talking about how Iran's nuclear program is the greatest threat to the world. In many ways, I think the threat has been hyped. Yes, there's concern about Iran's future intentions and Iran needs to be more transparent with the IAEA and international community. We still have outstanding questions that are relevant to the nature of Tehran's program, and we still need to verify that there aren't undeclared activities taking place inside of the country. But the idea that we'll wake up tomorrow and Iran will have a nuclear weapon is an idea that isn't supported by the facts as we have seen them so far. It's urgent, however, to initiate a dialogue between Washington and Tehran to build trust, normalize relations, and allay concerns as proposed by President Obama. To me, that's the only way forward.

That's not a popular position. I'm accused by some of politicizing the evidence. About Iran, I've been told, "Mind your own business; you're a technician." And yet, at other times, on other matters, I have been told that I'm the custodian of the Nuclear Non-Proliferation Treaty—sometimes by the very people who tell me to mind my own business when it comes to Iran. I don't put much stock in either designation. I'm neither a custodian nor a technician; I'm merely someone who is trying to do his job. And I know the world won't be successful in achieving nuclear disarmament unless there's an equitable universal arms control regime in place that deals with the root causes of proliferation such as poverty, conflicts, and violence. So when I tell our member states, "If you want the agency to do a good job at stemming proliferation, you have to work on the root causes," that's not politicization; that's looking at the big picture and being faithful to my job.

BAS: What lessons have you learned from your experiences with Iran—and the same for North Korea and Iraq?

ELBARADEI: One lesson is to keep the dialogue going—particularly in the case of North Korea. There, whenever a dialogue was taking place, things were on the right track. Whenever the dialogue stopped, things started to go bad. Now, two nuclear tests later, we have no choice but to talk to the North Koreans and understand where they're coming from.

Another lesson is to use sanctions only as a last resort and to avoid sanctions that hurt innocent civilians. As we saw in Iraq, sanctions only denied vulnerable, innocent civilians food and medicine, resulting in some of the most egregious human rights violations I've ever seen—all in the name of the rule of law. So we should try very hard to establish an ongoing dialogue, because sanctions are never a solution.

As for force, I'm not against it. But to me, you have to exhaust all

other possibilities for a peaceful resolution until force becomes the last option. You can't jump the gun as the United States did in Iraq. In total, one out of three Iraqis has had his or her life pulverized because of a war that never in my view should have been fought in the first place.

BAS: When might military force be used to deal with proliferation?

ELBARADEI: Very, very rarely. In fact, usually the use of force and isolation leads to nuclear programs expanding, not retreating. Let's look at a couple of the cases you asked me about. Saddam Hussein only started his huge clandestine nuclear program after the Israelis bombed his Osirak facility in 1981. In terms of Iran, when it was denied nuclear technology by other countries after the Islamic Revolution, Tehran took part of its program underground. In retrospect, wouldn't it have been better to deal with both Iraq and Iran differently? Obviously, there need to be incentives and disincentives, but overall, I believe in a comprehensive approach that addresses the symptoms and root causes and is based on mutual respect.

BAS: Is this how being IAEA director-general has changed your worldview the most?

ELBARADEI: My worldview has changed a lot in the last 12 years. We still haven't absorbed that the world has become one global village. We talk about it, but we don't act like it. We continue to put an emphasis on border, language, and ethnicity. That's wrongheaded. More and more I believe that unless we have a security system rooted in human security, which would allow everyone to live with dignity and freedom, we'll never truly be secure—either as nations or individuals. ■

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