

The use of a single nuclear weapon could dramatically change life on Earth.

So why does it matter if there are five or 5,000?

Simply put, the more countries with nuclear weapons, the higher the risk one will eventually be used. This is why policy makers use multiple tools to try and stop or slow their proliferation.

The first tool is diplomacy, which resulted in the Nuclear Nonproliferation Treaty. Nearly every country in the world has joined the NPT since it was adopted in 1970.

Five countries already had nuclear weapons at the time. By joining the treaty, they pledged to work toward giving up their nuclear stockpiles and agreed not to help any country without nuclear weapons acquire them. Meanwhile, those countries without nuclear weapons pledged not to acquire them at all.

But the NPT's biggest weakness is that it is a voluntary agreement, which means a country can simply decide to leave at any point—as North Korea did in 2003.

It is also fundamentally an honor system. Countries are trusted to be transparent about their nuclear programs and to cooperate with inspectors.

Security guarantees are another important tool of nonproliferation. The United States has pledged to come to the defense of dozens of allies, discouraging them from developing nuclear arsenals of their own.

But if confidence in the United States' commitment erodes, allies may be more inclined to build their own nuclear weapons.

Applying financial pressure through sanctions can discourage a country from developing a weapons program; lifting financial pressure by removing sanctions can have the same effect.

But critics argue that sanctions can rarely get a country to act counter to its perceived self-interest. And some countries, like North Korea, have proved willing to pay the high price of sanctions.

Increasingly cyber tools are used to interrupt nuclear programs, as was reportedly the case with both Iran and North Korea.

Military force is also a policy option, one that Israel used when it launched preventive strikes against Iraq and Syria.

But it can be difficult to locate weapons and even harder to hit them.

Transcript: Tools of Nonproliferation

And military force carries the risk of retaliation ... potentially with the same nuclear weapons that were targeted for destruction.

Since the NPT went into force, these policy tools have had mixed results: four countries acquired nuclear weapons, several voluntarily gave them up, and many others had the capacity to build them but opted not to.

This outcome reflects the hard reality that countries hold competing interests. And other goals, such as protecting an ally or building a strategic partnership, are often prioritized above nonproliferation despite the appeal of reducing the risk these destructive weapons pose.