

Nuclear Proliferation and Climate Change

- ▶ The use of nuclear weapons, whether accidental or deliberate, could change the climate more abruptly than global warming. Even a small-scale regional nuclear war could decimate global agriculture and starve billions.
- ▶ International aggression, sparked by a real or suspected nuclear power program, is a costly distraction and counterproductive to addressing climate change.
- ▶ The effects of climate change itself—droughts, floods and migrating populations—could exacerbate tensions between nations. Those with nuclear weapons, should the stresses become extreme, might find the temptation to use them irresistible.
- ▶ The fallacious arguments promoting nuclear energy as a climate change “solution” instead increase global proliferation dangers and detract from real solutions like wind and solar power.



A Man Ahead of his Time

“Human society is too diverse, national passion too strong, human aggressiveness too deep-seated for the peaceful and the warlike atom to stay divorced for long. We cannot embrace one while abhorring the other; we must learn, if we want to live at all, to live without both.”

Jacques Yves Cousteau, 1976

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Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

For fully footnoted, detailed documentation on the nuclear power-nuclear weapons link, see the [Nuclear Weapons page on the Beyond Nuclear Website](#).

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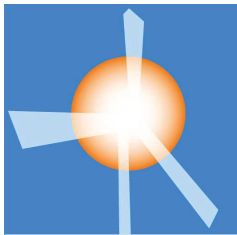
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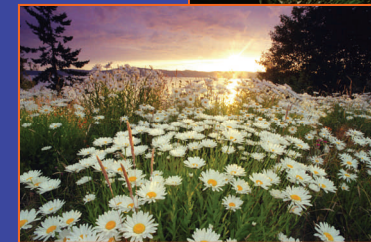
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Atomic Energy and Global Security



Nuclear power and the link to nuclear weapons

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INTRODUCTION

All civilian reactors produce plutonium, the trigger for a nuclear weapon. Despite this, nuclear energy is offered as an “inalienable right” to countries who have signed the nuclear Non-Proliferation Treaty and pledged not to develop nuclear weapons. This policy has already failed in Iran and in North Korea which shifted to weapons production after withdrawing from the NPT. India, Pakistan, Israel and North Korea—the “unofficial” nuclear weapons states—all developed weapons from civilian nuclear programs. At least 32 additional countries could do the same using uranium and plutonium from their civilian programs.

Reactors to Bombs

- ▶ A typical 1000 MW nuclear reactor produces enough plutonium each year for 40 nuclear bombs.
- ▶ Nuclear power is the only source of energy whose technology is “interchangeable and interdependent” with that of nuclear weapons development.
- ▶ Uranium enrichment is needed for both civilian and military nuclear programs. Uranium enriched to 5% U-235 is reactor grade, at 90% it is weapons grade. But at higher than 20% it is weapons-usable.
- ▶ Iran, enriching uranium for “peaceful” purposes, is suspected of having military intentions. The fact that no one can be sure highlights the perpetually blurred line between energy and weapons production.
- ▶ At least 13 countries in the Middle East and the military dictatorship in Burma, have expressed interest in acquiring nuclear power. Proliferation experts agree that these desires have little to do with energy needs and are founded in regional security concerns and nuclear weapons posturing.



Nuclear-Provoked Aggression

- ▶ The presence of an actual or suspected nuclear energy program can provoke attacks by other countries. Israel bombed nuclear facilities in Iraq and Syria while the U.S. used the pretext that Iraq possessed nuclear weapons to justify invasion.
- ▶ The spread of nuclear power programs makes transition to nuclear weapons production more feasible. If nuclear weapons are developed, then used, even in a regional conflict, the consequences for human and planetary survival become more dire.

“Loose Nukes”

- ▶ As nuclear technology spreads, the risks that terrorists might acquire a nuclear weapon or the materials to construct one increase. The exposure of the A.Q. Khan Pakistani nuclear black-market network points up this danger.
- ▶ Incidents in the U.S. in which nuclear weapons or components were transported unwittingly, point up the fallibility of nuclear weapons security.
- ▶ An average nuclear power plant contains 1,000 times as much long-lived radioactivity as was released by the Hiroshima bomb. Reactors are vulnerable to attack but also invite the potential for theft of nuclear materials.

The Challenge of Verification

- ▶ The international system of safeguards, inspection and verification—to ensure that states with nuclear power programs do not develop nuclear weapons—has proven to be ineffective, with Iran a case in point.

Crossing the Military-Civilian Divide

- ▶ Plans to revive reprocessing in the U.S. would extract weapons-usable plutonium from highly radioactive spent fuel, making it easier for terrorists to obtain this dangerous material.
- ▶ A plan to create “supplier” nations that would lease nuclear fuel to other nations, reinforces the existing divide between the nuclear “haves” and “have-nots” which is not conducive to global security.
- ▶ Reprocessing breaks a longstanding barrier between military and civilian uses of fissile materials. Due to proliferation concerns, both presidents Ford and Carter banned reprocessing in the U.S.
- ▶ The U.S. Department of Energy intends to produce reactor fuel using plutonium from dismantled nuclear weapons. The commercial use of plutonium blurs the line between the military and civilian nuclear sectors and increases proliferation risks.

