

Stuart Hamby writing sample

Chernobyl

30 years later

How has Earth responded to one of mankind's worst disasters?

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Chernobyl in 2016 is a place of transitions.

The site on April 26, 1986 of the first nuclear disaster to merit the highest rating of seven on the International Nuclear Event Scale (the Fukushima disaster of 2011 being its sole peer in the category), 'Chernobyl' remains, in the minds of a generation, synonymous with disaster, death and destruction.

The original incident claimed 56 lives, with an additional 4,000 cancer fatalities due to radiation exposure in the following years. (Mortality numbers are estimated due to the difficulty in pinpointing exact contributing factors of diseases.) The city of Chernobyl was largely abandoned, the neighboring city of Pripyat (closer to the reactor) was entirely evacuated, and a permanent exclusion zone of 30 kilometers around the reactor site was established. There remain dangerously high –lethal, in fact – levels of radiation in both cities and the surrounding region.

In fact, a *USA Today* in-depth report on Chernobyl estimates that “an area the size of Rhode Island will not be radiation-free, if ever, for at least 24,000 years.” Scarily, this is long enough that all memory of the accident and its deadly legacy could plausibly be lost. Given a widespread and prolonged disruption of civil order (not unthinkable in the region), local communities at the very least could conceivably lose all knowledge of the dangerous zones. (For comparison, all knowledge of Machu Picchu was completely lost within only a few hundred years.) In fact, according to the Wikipedia's *Chernobyl Exclusion Zone* article, “some dangerous burial sites [of radioactive material] remain unmapped and known only by recollections of the liquidators.”

Nevertheless, thirty years after the crisis, there is a surprising amount of forest regrowth, which, along with the disappearance of human agricultural and animal husbandry activities, has allowed the return of wildlife, including elk, moose, boars, wolves, and lynx. Although wildlife and plant populations did suffer population and reproduction rate losses from the initial acute dose of radiation, the site has rebounded, facilitated (according to a report

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[<https://www.iaea.org/technicalcooperation/documents/chernobyl.pdf>] by the International Atomic Energy Agency (IAEA)) “by the removal of human activities.”

This same report goes on to state that “since 1986, radiation levels in the affected environments have declined several hundredfold because of natural processes and countermeasures. Therefore, the majority of the ‘contaminated’ territories are now safe for settlement and economic activity.” Not only that, but because of the disappearance of human activity from the area, “[t]he Exclusion Zone has paradoxically become a unique sanctuary for biodiversity” where certain species are being observed that were only rarely seen before the accident.

Perhaps the lessons to take away from Chernobyl are twofold: mankind is at a dangerous stage of technological advancement, described as the ‘self-annihilation threshold’ in which we are able to engineer our own extinction – if not destroy outright the entire ecosystem that supports life on Earth. But, despite the grievous damage we inflict on the Earth, time and again, nature demonstrates a surprising resilience and a penchant for bouncing back.

Nevertheless, if we wish to safeguard the continued existence of our species, then we need to learn to rein in the destructive side of our technological progress. Otherwise, there may come a crisis from which nature of a kind may bounce back, but it may be too fragile to sustain human civilization.