

# Under a Nuclear Cloud

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"Two hands reach out for the ivory of an upright piano. The pianist runs his fingers over the black and white keys, tuning his hands in search for the right notes. His ears pique as he finds the sound he is looking for. As he begins to play, his fingers recall fragments of a melody he once heard. The music carries him to a tranquil memory, but nobody can see his smile because Berik Syzdykov was born without a face.

Berik was born deformed and blind as one of the million victims of radiation from Soviet nuclear testing. August marks sixty years since the test detonation of the first Soviet atomic bomb, but the human toll is still being passed down through the next generation of victims. During the Cold War, the Semipalatinsk Polygon covering 18,500 square kilometers on the steppe of northeast Kazakhstan, was the site of a secret Soviet nuclear testing programme. Through four decades until the early nineties, over four hundred nuclear weapons were test detonated in the atmosphere and underground in preparation for a war that never happened



Nurse Larissa Soboleva holds two-year-old Adil Zhilyaev in an orphanage in Semey, Kazakhstan Nov. 24, 2008. Adil was born blind and afflicted with Infantile Cerebral Paralysis (ICP) and hydrocephalia, as a result of his mothers exposure to radiation during years of Soviet weapons testing during the Cold War. He was abandoned by his parents, and is now cared for in an orphanage.



Mayra Zhumageldina sleeps with her 16-year-old daughter, Zhannoor in their home in Semey, Kazakhstan.

The locals were used as guinea pigs to test the effects of radiation on human populations. Villagers living close by were given virtually no protection or warning of the dangers of radiation.

Today, only the frenetic chirp of a Geiger counter warns us of the invisible radiation that makes this nuclear wasteland so dangerous that scientists hesitate to spend any amount of time there. Yet, almost two million villagers spend their entire lives in and around the affected area –drinking ground water, growing crops, and grazing their livestock off the highly irradiated land.

The radiation has silently devastated three generations of people in Kazakhstan, creating health problems ranging from thyroid diseases, cancer, birth defects, deformities, premature aging, and cardiovascular diseases. Life expectancy in the area is seven years less than the national average of Kazakhstan. Even though nuclear testing ended twenty years ago, these conditions will be passed down for generations to come."



Nikita Bochkaryov, 18, types with a stick attached to a helmet during a Russian grammar lesson with a teacher, in his apartment in Semey, Kazakhstan Jan. 14, 2009.



Mayra Zhumageldina bathes her daughter, Zhannoor, in Semey, Kazakhstan March 2, 2009.



Berik Syzdykov, 29, sings and plays piano in an apartment in Semey, Kazakhstan Nov. 19, 2008. Berik was born deformed and without eyes due to radiation exposure during years of nuclear tests during the Cold War. He learned to play piano and fell in love with opera when he travelled to Italy for an operation on his face.



Berik Syzdykov, 29, is helped by his mother, into his apartment in Semey, Kazakhstan Nov. 18, 2008.



Berik Syzdykov, 29, smokes a cigarette outside a hill overlooking the Kazakh city of Semey Nov. 24, 2008.

Nikita Bochkaryov is dried by his mother Sybilla after being bathed. Being born with Infantile Cerebral Palsy, he cannot speak or control his limbs: he uses a keyboard and a stick to communicate. His life exists on the Internet, where his mind is liberated from his physical disability, enabling him to write stories, letters and poems, and communicate with his loved ones.





Nikita Bochkaryov shares a tender moment with his mother Sybilla in their apartment in Semey, Kazakhstan Jan. 12, 2009.



Nikita Bochkaryov, 18, is bathed by his father in Semey, Kazakhstan Jan. 12, 2009.

10-year-old Talgat Kasenov rolls over involuntarily as his mother attempts to massage his legs in Semey, Kazakhstan Jan. 7, 2009. Talgat was born with Infantile Cerebral Palsy, and is unable to move. His mother massages his legs to remove the spasms of his muscles, although he finds this painful.





Mayra Zhumageldina kisses her 16-year-old daughter, Zhannoor outside their home in Semey, Nov. 21, 2008. Zhannoor was born with microcephalia and sixth-degree scoliosis — a twisted spine — because of exposure to high levels of radiation. The defect harmed Zhannoor's brain development as if she were in a permanent vegetative state. She cannot think, speak or perform basic functions.





Nuclear scientists use geiger counters to test radiation levels at the site of the first surface atomic explosion at the Semipalatinsk Nuclear Polygon in Kazakhstan Jan. 6, 2009.



Starlight lights up the abandoned military town of Chagan, next to the Semipalatinsk Nuclear Polygon in Kazakhstan Feb. 27, 2009.



Mayra Zhumageldina pushes her 16-year-old daughter, Zhannoor on a wheelchair in Semey, Kazakhstan Nov. 27, 2008.



A woman at a Russian Orthodox church in Kurchatov rings bells for Christmas Eve services Jan. 6, 2009.

Mayra Zhumageldina massages her 16-year-old daughter, Zhannoor, before bed in their home in Semey, Kazakhstan. The high levels of radiation Mayra endured during Soviet nuclear testing caused Zhannoor to be born with microcephalia. The defect, which harmed Zhannoor's brain development, prevents her from speaking or performing simple functions.

