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## 'Absolutely shocking': Niger Delta oil spills linked with infant deaths

Babies in Nigeria at double the risk of dying before they reach a month old if mothers lived near the scene of an oil spill before conceiving, study shows

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Babies in [Nigeria](#) are twice as likely to die in the first month of life if their mothers were living near an oil spill before falling pregnant, researchers have found.

A new study, the first to link environmental pollution with newborn and child mortality rates in the Niger Delta, shows that oil spills occurring within 10km of a mother's place of residence doubled neonatal mortality rates and impaired the health of her surviving children.

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Crucially, oil spills that occurred while the mother was still pregnant had no effect on child or neonatal mortality. But even spills that happened five years before conception doubled the neonatal mortality rate from 38 deaths to 76 deaths for every 1,000 births, the data

found.

“The results from the study are absolutely shocking,” said Roland Hodler, an economics professor from the University of St Gallen in Switzerland, who led the study. “I didn’t expect to see this effect on pre-conception. Why we don’t find a stronger effect [on the foetus] during the pregnancy is not entirely clear – maybe it is due to the cumulative contamination of crude oil in the water and soil, which increases over time. But that doesn’t explain the entire effect.

“This is a tragedy. Even four to five years prior to conception, an oil spill still matters. I think this should be seen as a first-world problem for something to be done.”

Regular, uncontrolled spills have been a prominent feature of Nigeria’s oil industry – the nation’s primary source of GDP – since crude was discovered there more than 60 years ago. An estimated **240,000 barrels of crude oil** are spilled in the Niger Delta every year, polluting waterways, contaminating crops, and releasing toxic chemicals into the air.

A **2011 report** by the UN Environment Programme estimated that, after decades of repeated oil spills in Ogoniland, it would **take 30 years** to reverse damage to public health and the regional ecosystem.

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Unborn and newborn infants are most vulnerable to oil-related pollution because they have not yet developed basic defences such as the blood-brain barrier, which helps protect against toxic chemicals, the study found. Even small doses of pollution are likely to be large in comparison to an infant's body weight, while mothers who ingest poisoned food or contaminated water are also at greater risk of maternal malnutrition and sickness, potentially increasing infant mortality risks, said the researchers.

By pairing georeferenced data from the [Nigerian Oil Spill Monitor](#) – which recorded the location of more than 6,600 spills between 2005 and 2015 – with the 2013 national demographic and health survey, Hodler and his colleague Anna Bruederle were able to map oil spill locations in relation to neonatal and child mortality rates among the surrounding populations. The result was an analysis of roughly 5,040 children born to 2,700 mothers in 130 clusters, all within 10km of the closest oil spill.

The researchers then compared siblings' health histories, contrasting the mortality rates of infants conceived or born before the first nearby oil spill with those conceived or born subsequently.

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The data proved that neonatal mortality was higher the closer the oil spill was to the mother's location, and that any oil spills prior to conception increased the incidence of low weight-for-height, notably in the first year of life.

The Nigerian government did not respond to multiple requests for comment.

Activists have called the findings "disturbing and disheartening".

"It is shocking to consider how many children may have died in the past 50 years – since oil exploration started in Nigeria's Niger Delta – as a direct result of regular and uncontrolled oil spills," said Debbie Ariyo of Africans Unite Against Child Abuse, a charity that supports the rights and welfare of African children.



"The ongoing environmental damage means that more children are exposed to harmful chemicals in polluted drinking water, air and food produce. Simply put, as long as the oil spills continue unabated and clean up of the region is delayed, then unfortunately more children will be harmfully impacted."

*Additional reporting by Emmanuel Akinwotu*

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