

## **Oil Exploitation in the Niger Delta: The Social-Economic and Environmental Implications to the Ofuoma Community**

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### **Abstract**

Crude oil exploitation activities have been implicated as major causes of social political and environmental destruction within the oil-bearing communities of the Niger Delta. This study analysed the social-economic and environmental impact of oil exploitation on the Ofuoma community. The study relied on interview, secondary data from journals, published and unpublished materials on related literature. The data were analysed using descriptive and historical methods to make reasonable deductions. The study revealed that severe social-economic and environmental degradation has been inflicted on the Ofuoma community as a result of oil spillages and other factors to the extent that economic activities in the area have been adversely affected leaving the people completely impoverished, with no meaningful alternative source of livelihood. Both the land, water, and air have been polluted with crude oil over the years, thus depriving them of the opportunity to continue to engage in their usual basic economic activities, prominent among which are farming and fishing, from where they met their basic economic needs. Stakeholders' participation in critical decision-making was visibly absent, thus creating doubts about the credibility of even the best and well-intended policy of the principal actors in the oil industry, thereby compounding the already pitiable situation. It becomes, pertinent to put in place a deliberate policy whereby the people will be fully integrated in the scheme of things especially when certain policy decisions are being taken.

**Keywords:** economic, environment, oil exploitation, ofuoma community, social, Niger Delta.

### **Introduction**

Since the commercial discovery of crude oil at Oloibiri in 1956, the Niger Delta region has seen both intense and aggressive oil activities. The Nigerian National Petroleum Company (NNPC), Shell International, Elf, and Agip collaborated to form the Shell Petroleum Development Company (Nigeria) Ltd (SPDC), which was in charge of these operations (Jatto, 2024). A large portion of the Niger Delta has been left barren, impoverished, and uninhabitable during the past

50 years of oil extraction due to ecological destruction on the one hand and neglect brought on by the production of crude oil on the other. The environment's deterioration is one of the main issues facing the oil-producing regions nowadays. It is an undeniable fact that the Niger Delta's environment has been severely contaminated, with disastrous effects on the people's economy and overall standard of living (Onor & Ityonzughul, 2024).

The multinational oil companies operating in these areas and the Nigerian government have not made a concerted effort to control the environmental problem associated with oil exploitation. Instead, the people's struggle and the violence that has recently typified the region have been the expression of the social and ecological risks that oil producing communities have been facing. The unfortunate people of the region, as well as the land and rivers on which they have lived and thrived for centuries, are the victims of a vicious ecological war that the oil companies operating in the area have instigated through negligence and cynical indifference, according to Sabiu & Magaji (2024).

For the people living in the Niger Delta, oil exploitation has turned into a burden rather than a benefit. They have experienced ongoing conflict, economic hardship, and environmental destruction. To exacerbate the situation, a corrupt government's political considerations and greed prevented a large portion of the money made from these enormous reserves from going back to the Niger Delta to aid in the region's rehabilitation (Dzedzehavemmoon & Ferro, 2024).

Thus, as evidenced by the data, oil exploitation negatively impacts the ecological, socioeconomic, and political environments, leading to land abandonment, deforestation, air and water pollution, and other issues. The quality of life is declining in the impacted areas as a result of these negative effects, which have intensified. The scientific literature on the overall and long-term effects of oil exploitation on the region is still in its early stages of development, despite the detrimental effects of oil exploitation on the environment and the way of life of the host communities (Jatto, 2024; Dzedzehavemmoon & Ferro, 2024; Onor & Ityonzughul, 2024; Babatunde, 2023). The damage that oil activities are causing to the environment has drawn the attention of environmentalists and other specialists. The implication of the social-economic and environmental impact on the way of life of the residents of the Niger Delta's oil-producing regions is a major point of contention. In light of the aforementioned, this study investigates how oil exploitation affects the socioeconomic and environmental landscape of the Ofuoma's community in the Niger Delta region.

### **Statement of the Problem**

The Niger Delta region's ecosystem has been severely contaminated by decades of oil and gas exploration and production by multinational oil companies (MNOCs), according to an independent assessment report released by the United Nations Environmental Programme in 2011 (Olukaejire, Ifiora, Osaro, Osuji & Hart, 2024). As highlighted by (Olukaejire, Ifiora, Osaro, Osuji & Hart, 2024; Ikeke, 2024), these MNOCs' decades-long massive investments in this sector have translated into enormous profits for them and enormous losses for the host communities. The indigenous people of the Niger Delta have not profited from the MNOCs' profits. Instead, since large-scale oil production began in their communities, the people have experienced unjustifiable hardship and economic stagnation. This is demonstrated by the extreme environmental deterioration and the ensuing indifference from the government and oil company operators, whose rules and regulations are being pursued with such feebleness that the effects are not felt at all.

The Niger Delta region is specifically mentioned here due to the resource it provides for the nation and the severity of the socioeconomic and political deprivation it faces, even though the obvious neglect is a nationwide issue (Agoola & Kiale, 2024). The vast majority of people are living in extreme poverty, and the only way they can meet their basic needs for food, shelter, and other necessities of life is being destroyed by constant oil pollution from gas flaring, oil spills that contaminate land and marine environments, and other environmental degradation.

The country's entire population is supposed to benefit economically from oil and gas extraction. However, this is not the reality since the general populace, particularly those living in areas that produce oil, are extremely poor and their communities are severely underdeveloped. This study examines the socioeconomic and environmental implications of oil exploitation in Ofuoma due to these problems.

### **Review of Related Literature**

Like other parts of the country, the Niger Delta's population was agribusiness-based prior to the discovery and production of oil. They were farmers specifically, and the setting was favourable, hospitable, and productive. The soil was suitable for farming because it was equally fertile. As a result, there was enough high-quality agricultural produce to meet the population's needs for both subsistence and commerce. Up until oil was found and production started, which changed the ecosystem. The devastation of the soil and farmlands—the source of the people's livelihood—by petrol leaks and oil spills is one of the main issues related to oil production. Nigeria produces roughly 24 billion cubic meters, or 0.84 trillion cubic feet, of associated natural gas annually through its oil extraction process. Over 70% of Nigeria's oil fields are still gas, according to a report released in November by the Department of Petroleum Resources (Ehizoyanyan & Oke, 2024). Nigeria produces roughly 2.524 trillion standard cubic feet (SCF) of gas per year, while its estimated gas consumption is 2.235 trillion SCFD, with a whopping 289.6 billion SCF per day (Olukaejire, Ifiora, Osaro, Osuji & Hart, 2024).

While it is impossible to completely prevent oil spills during oil drilling operations, the Niger Delta presents a challenge due to the size of the spills and their frequent occurrence, coupled with a lack of effort to control them when necessary. When oil spills and is not cleaned up, it affects both terrestrial and marine resources and has a widespread effect on the local ecosystem. The survival of species in agricultural areas and aquatic habitats is the most negatively impacted (Ehizoyanyan & Oke, 2024).

According to Aderoju, Airebamen, & Yalumo (2024), some of the factors that contribute to oil spills are machine failure, sabotage engineering drills, corrosion of pipes and installations, poor infrastructure maintenance, and the release of crude oil from offshore platforms, and insufficient care when loading and unloading oil vessels. In their 2024 study, Adigbuo & Forae used Ramon Lopez's Cobb Douglas production function model to investigate the relationship between oil pollution and agricultural productivity in Nigeria's Niger Delta.

Their findings demonstrate that while land, labour, and capital positively increased agricultural productivity in the Niger Delta, rising oil spill levels and forest loss had a negative impact. Udo, Uwanta, Awaka-ama, Ubong, & Igwe (2024) used both primary and secondary data to investigate the effects of environmental degradation on human health in nine chosen oil communities in Delta State, Nigeria, using cluster and principal component analysis; in order to determine the impact of gas flaring on human health, a 1-year hospital data set was used, based

on data consistency and availability on the necessary illnesses, such as bronchitis, cough, asthma, cardiovascular diseases, eye infections, and skin infections. According to Ubong & Igwe (2024), the frequency of occurrences was high, indicating statistical significance.

This study uses an estimable model based on a Cobb Douglas production function to investigate the impact of oil spills on production in the Nigerian Niger Delta from 1981 to 2015. The results imply that while farm labor has a positive impact on production, oil production and spills have a negative impact on it. Given the above, it makes sense to conduct an empirical investigation into how oil exploration and the emissions that result from it affect public welfare. These factors determine whether there have been any distortions and how much the extraction of oil and minerals in Nigeria, particularly in the Niger Delta, has harmed the environment and the welfare of the populace. Hydrocarbon Emission (CO<sub>2</sub>) is our option. Emissions of carbon dioxide are produced when fossil fuels are burned and cement is made. Someone consist of the carbon dioxide released during gas flaring and the consumption of solid, liquid, and gas fuels.

Idibra et al. (2023) claim that social and political unrest has arisen in the Ofuoma community as a result of the detrimental social and political effects of oil exploitation. The state of development in the oil-producing regions is appalling. Considering the wealth of the area, the basic infrastructure of roads, housing, electricity, water, education, communication, and health is extremely underdeveloped. The population is vulnerable to water-borne illnesses and lacks access to sanitary facilities and clean drinking water. Additionally, social amenities and physical infrastructure are deteriorating at an extremely fast rate. Human health and welfare are also at risk from pollution and the depletion of renewable freshwater resources.

Constant intra- and intercommunal conflict that results in the loss of lives and property is another consequence of the detrimental effects on the environment and the economy. Conflicts over contracts, compensation claims from oil companies, and ownership of the land where oil wells are located are typically the root cause of these disputes. Additionally, the disregard for the communities that produce oil has frequently infuriated them, leading to their militant youths taking out their frustration on employees of oil companies.

Celestine (2003) attributed the unequal exchange relationship between the people, transnational corporations, and the state as the root cause of the detrimental socio-economic effects of oil industry activities. According to Nicholas, Tarilayefa & Reverend (2022), systematic disequilibrium in the production exchange relationship between the state, the transnational companies, and the people is the reason why oil producing communities have remained glaringly socio-economically underdeveloped and impoverished despite the enormous oil wealth. Oil exports brought in enormous sums of money, but the region has also seen terrible degradation of the land and water, socioeconomic instability, rising rates of poverty and suffering, military occupation, and brutal violence.

Iheme (2023) further claimed that the socio-political climate of the oil-producing regions has been severely damaged by oil exploitation, severely endangering the delicate subsistence peasant economy and biodiversity, and consequently their entire way of life and very existence. Furthermore, communities that produce oil have essentially stayed dependent and underdeveloped, continuously losing their sense of agency, being socially and culturally excluded, and feeling emotionally estranged. The only people who directly profit from the exploitation and export of oil resources are the government and the oil industry's operators.

Additionally, it has sparked and intensified violent clashes between newly formed interest groups in the oil-producing regions. Consequently, oil-related activities have had a negative impact on the people's livelihood, safety, and security of life and property in the oil-producing areas. The destruction of the environment exacerbates social and economic inequality and complicates the situation for development. The results showed that there is a general lack of infrastructure, poor housing conditions, inadequate education, and malnutrition among the populace. The disappearance of social life due to a virtual lack of infrastructure (roads, waterways, telecommunication, utilities, and electricity), inadequate medical and educational facilities, and a shortage of skilled labour, a sparse industrial establishment, and other factors is the most obvious manifestation of life's pauperisation Jalloul, Miranda-Schaeubinger, Noor, Stein, Amiruddin, Derbew & Mollura (2023).

Sewage systems, adequate sanitation, and safe drinking water are not available in the oil-producing regions. Since the water covering the settlement at a level stage was stagnant, the drainage situation is extremely bad. The water is usually brackish in color and has a persistent sheen from spent oil. The contaminated river, which doubles as a sewage and waste disposal site, is the source of drinkable water. It makes sense why the surface water has a bad smell. Ghaffoori (2019) claims that drinking contaminated water causes sore throats and body scratches, particularly after a lot of rain, which speeds up the flow of waste from surrounding pits into the streams.

Sam, Zabbey, Vincent-Akpu, Komi, Onyagbodur, and Babatunde (2024) claim that the water used for bathing, cooking, and drinking has been tainted by pollution commonly associated with oil spills. The area's development commission (NDDC) borehole isn't fit for human consumption. According to a World Bank report from 1996, women and children in oil-producing regions are more vulnerable to illness than men. There is a very high death rate among the children. Diseases will inevitably spread when there is pollution in the air, sea, water, and agriculture. Due to gas flaring, there has been a rise in the prevalence of certain illnesses in the Niger Delta, including bronchial, asthmatic, upper respiratory tract, gastro-enteric, and partial deafness, particularly in children. Waterborne diseases cause illness and death when they are present in contaminated water. Worm infection and diarrhea are the most prevalent water-borne illnesses in the region. Consequently, the region's average life expectancy is decreasing.

Oghenetega, Ojengbede, & Ana (2020) According to a study, women who live close to oil fields may experience health problems from oil pollution, including skin mycosis, fatigue, itchy noses, sore throats, headaches, red eyes, ear pain, diarrhea, and gastritis. Moreover, these women also had a high risk of spontaneous abortion. It was found that both males and females in areas where oil exploitation had been practiced for at least 20 years had a higher incidence of cancer. Cancers of the stomach, rectum, skin melanoma, kidney, soft tissue, and cervix in men, and lymph nodes and lymph nodes in women, were found to have significantly elevated levels. There has been a noted rise in hematopoietic cancers in children. In addition, a lot of kids have light hair and swollen bellies, which are signs of kwashiorkor, a protein shortage condition.

Isukul, Udom & Ideozu (2023) draw attention to the fact that the water that people used for drinking, cooking, and bathing has been contaminated by pollution caused by oil spills. It is not safe to drink from the borehole that the Niger Delta Development Commission (NDDC), a government development organization, provided in the area. The commissioner for NDDC in Delta State asserted, however, that NDDC was committed to enhancing the welfare of the local

population in spite of the challenging topography and developmental obstacles facing the oil-producing regions of Ughelli North.

He outlined several projects, including the construction of roads, footbridges, and jetties as well as the refurbishment of staff quarters, classrooms, hostel blocks, health centres, hospitals, and doctor's offices. In the region, NDDC has also worked on water, shore protection, erosion control, and electrification projects. Furthermore, NDDC has carried out several human development initiatives. These included the computer literacy program, the skills acquisition program, the NDDC Assisted Mass Transit Scheme, the NDDC Solid Waste Disposal Scheme, and the NDDC Globacom self-employment business scheme. They were created with the welfare of the youth and residents of the oil producing areas in mind.

### **Background Overview of the Niger Delta**

Nigeria's coastline stretches for about 85 km in the direction of the Atlantic Ocean, between latitudes 4°15' to 4°50' and longitudes 5°25' to 7°37'. The land area along the coast is roughly 28000 sq/km. The continental shelf has a surface area of 46300 square kilometres. The mangrove and freshwater swamps, beach ridges, sandbars, lagoons, marshes, and tidal channels make up the coastal regions. Nigeria is 923,768 square kilometres in total size; 918,768 square kilometres are on land, and 13,000 square kilometres are in water (Okpara & Kharlamova, 2016). The coastal region experiences 1,500–4,000 meters of annual rainfall on average, and it has a mean average temperature of 24-32°C. The region is humid (Kuruk, 2004). The Niger-Benue and the Chad rivers are Nigeria's two major rivers (Okpara & Kharlamova, 2016).

A number of rivers flow directly into the Atlantic Ocean, and all other flowing water eventually empties into the lower Niger or the Chad basin. The Niger Delta, the second-largest delta in the world, is situated on Southern Nigeria's Atlantic coast. Its 450km of coastline ends at the Imo River entrance (Ozundu & Egbunike, 2023). The area, which is the largest wetland in Africa and among the three largest in the world, is roughly 20,000 square kilometres (Oluniyi, 2017; Okpara & Kharlamova, 2016; Ozundu & Egbunike, 2023). Rivers, creeks, estuaries, and stagnant swamps make up 2,370 square kilometres of the Niger Delta region, which is roughly 8,600 square kilometres in total. The Delta mangrove swamp, the largest mangrove swamp in Africa, is located about 1900 square kilometres (Kadafa, 2012). The Niger Delta is categorised as a tropical rainforest, home to a wide variety of aquatic and terrestrial plant and animal species.

This region is regarded as one of the top ten most significant wetlands and marine ecosystems globally, and it can be divided into four ecological zones: coastal inland zone, freshwater zone, lowland rainforest zone, and mangrove swamp zone (Kalu & Mban, 2016; Oluniyi, 2017). The states of Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Ondo, Imo, and Rivers are collectively referred to as the Niger Delta. The Niger Delta region is home to around 25% of all Nigerians, according to National Census estimates from 1991 (Oluniyi, 2017; Okpara & Kharlamova, 2016; Ozundu & Egbunike, 2023). As of 2005, the Niger Delta region was home to about 30 million people, making up more than 23% of Nigeria's total population. This population is growing steadily. (Ocheje & Onyishi, 2009; Alaba, 2019).

### **Research Methodology**

This study adopted the descriptive and historical research methodology to make reasonable deductions from the data, which relied on secondary data from government and non-governmental organizations such as the Nigerian National Petroleum Corporation (NNPC), United Environmental Protection Programme, oral interviews, published and unpublished materials, online sources and journal articles. The study aims to determine the social-economic and environmental implications of oil exploitation in the Ofuoma community.

### **The Social-Economic and Environmental Implications of Oil Exploitation on Ofuoma**

Since 1999, the Nigerian Niger Delta community of Ofuoma has been impacted by oil exploitation. Due to the presence of oil companies, especially the multinational Shell Petroleum Development Company (SPDC), the community has undergone significant social, economic, and political changes. Increased economic activity and the influx of oil workers have resulted in changes in social dynamics, a strain on community resources, and an increase in population.

Usiaphre & Bobi in an interview (2024) espoused that oil exploitation has negatively impacted the community's main sources of income—farming and fishing—by causing pollution, environmental degradation, and loss of livelihoods. Unable to adapt, farmers and fishermen typically move in search of greener pastures to neighboring urban centres like Warri and Ughelli. This movement suggests that the previously mentioned urban centres have a worsening unemployment problem. People in the community have adjusted by changing up their sources of income, such as trading and small-scale farming. However, the lack of access to markets, credit, and other resources has limited these adaptations. The food security and financial stability of the community have been jeopardized, which may have long-term effects on their standard of living.

The interview with Onome & Atife (2024) the Nigerian Petroleum Development Company pledged to stay there until their demands were met, which resulted in the closure of the Erhoikie flow station and an estimated loss of 44,880 barrels per day. In defense of their conduct, Hon. Idiovwa stated that SPDC had marginalized the Ofuoma community in their facility for more than 60 years. Ofuoma's oil exploration has, however, also had a number of positive effects on the community, including: Economic growth and development; an improvement in some community members' standards of living; an improvement in infrastructure and amenities; an increase in government revenue; and the creation of employment opportunities. These positive effects have not only had a significant impact on some residents' lives, but have also contributed to the community's overall development. It is important to note, however, that these benefits have not been equally distributed. Ofuoma's oil exploration has also had a number of detrimental effects on the local population, such as pollution and environmental degradation, community member relocation and displacement, loss of traditional livelihoods and cultural heritage, health issues and an increased risk of illness, conflict, and social unrest. The environment, community members' health, and well-being have all suffered significantly as a result of these detrimental implication, which have also sparked questions about the equity and sustainability of oil exploration in Ofuoma.

According to the interview with Okpalefe (2024) Ofuoma has faced numerous challenges, including oil spills, gas flaring, and environmental degradation. The community has also experienced social and economic impacts, including displacement, poverty, and unemployment. Despite these challenges, the people of Ofuoma have continued to fight for their rights and demand justice from the oil companies and government. There have been various campaigns and protests against oil companies in Ofuoma, Ughelli North Local Government Area of Delta State,

Nigeria, due to environmental and social concerns. Some of the notable campaigns and protests include:

1. "Stop the Spills" campaign by the Ofuoma Community (2012)
2. "Clean up Ofuoma" protest by the Nigerian Environmental Action Team (NEAT) 2015.
3. "Justice for Ofuoma" campaign by the Civil Liberties Organization (CLO) in 2017.
4. "Ofuoma Rising" protest by the Youths of Ofuoma in 2019.
5. "End Oil Pollution in Ofuoma" campaign by the Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN) (2020). However, much work remains to be done to address the lingering environmental and social impacts of oil operations in Ofuoma.

Also Ofuoma community is not an exception to the periodic reports of multiple "blow-outs" at prospecting sites combined with spills brought on by pipeline damage in Nigeria's oil-producing regions (Mahmoud, 2021). Natural rehabilitation could take one to 25 years, depending on the extent of contamination. Depending on the amount and type of oil spilt, the area's physical geography, the biota, metrological conditions, and other factors, the effects have been catastrophic in many ways (Yarkwan, 2023). Based on statistical data, the majority of oil spill incidents between 1976 and 1980 happened in the Niger Delta's offshore areas and purely mangrove swamp zones, which are the biologically most productive areas. The mangrove vegetation began to die in the contaminated waters within six (6) months. Periwinkles, crabs, and other mollusks perished as a result of the fire hazard, which spread to approximately 25 acres of land. Even worse, the water table was impacted over 15.1 ha, and approximately two years after the event, re-pollution of the top soil from below was discovered.

According to the aforementioned analysis, oil pollution can harm the environment in a number of ways, regardless of whether it results from the spill or discharge of crude oil or refined petroleum products. An oil film on the water's surface has the potential to stop natural aeration and cause trapped marine life to perish. Fish may occasionally consume oil spilt on them or other food items that have been contaminated with oil, rendering them tasteless and unfit for consumption.

Nnoli, Olomukoro, Odii, Ubrei-Joe & Ezenwa, (2021) oil spill on the land may cause a temporary delay in the growth of flora and, in the worst situation, the complete annihilation of the vegetation. Additionally, it might result in a possible fire hazard, similar to an oil pipeline spill that, according to the Royal Society of London in 1982, contaminated roughly 360 km of salt marshes and rendered the soil unfit for cultivation. Due to a decline in the number of shellfish stocks that are reproductive age and an increase in the mortality of larvae setting on the oiled sediments, it was reported that some shellfish populations may take five to ten years to recover from the effects of the spill. Concerns were raised about how drilling mud and cuttings should be handled, as well as how to dispose of oil-based mud at both onshore and offshore sites, as well as how sampling and analysis procedures should be followed.

People in the oil-producing Niger-Delta region appear to have a good understanding of these environmental issues. For example, in a study conducted by Jatto (2024) on two (2) small communities near the 27 Forcados Oil Terminal, 86% of the respondents in one community reported that among four broad categories of problems, oil pollution was the most important. In contrast, 45% of the respondents in the other six communities identified similar problems. An

assessment of the current situation is desperately needed, especially in the regional area of the Ofuoma community in Ughelli North, Delta State, Nigeria, given the consequences of oil exploration and exploitation that have been identified in the reviewed literature.

This is one of the main ways that the public's health has been severely harmed by the free but dangerous methods of disposing of natural gas (Ikeke, 2024). According to the Nigeria Conservation Foundation, Nigeria released 12 million tonnes of methane and 37 million tons of carbon dioxide in just 1994. This indicates that the oil fields of Nigeria have a greater global warming impact than those of the rest of the world. The findings indicate that gas-flaring sites located in the western Niger Delta produce a significant amount of heat, with an average radius of 0.5 km. This leads to thermal pollution in the surrounding sub-region and Ofuoma.

In an interview with Ejaife (2024) measured a number of gas flare locations and discovered temperatures as high as 40°C. In fact, the elevated temperatures in the vicinity of the gas flare sites suggest that the oil spill has produced a unique microclimate. It is known that some of the fish and other animals that avoid pollution right away have ingested harmful substances, which then end up in humans who consume them. Man will then become infected as a result, and there will also be additional negative effects in the form of genetic mutations. Sometimes catastrophic fire outbreaks caused by pipelines pose a serious threat to public health vandalization.

## Conclusion

Nigeria has seen significant economic growth as a result of the extensive and highly aggressive oil exploration and exploitation activities in the Niger Delta Region, but the oil-bearing communities have also suffered grave socioeconomic and environmental repercussions. Despite the significant economic progress made by the nation, the vast majority of Niger Delta residents still lack economic independence. Their economic problems have been greatly exacerbated by the ongoing pollution of their waters and degradation of their land caused by oil spillage and other pollution agents. A significant contributing factor to this state of affairs is the glaring mismatch between the major oil industry participants (MNOCs) and the pertinent stakeholders. Therefore, it is recommended that suitable concepts for managing the current relationships be developed in order to resolve positional conflicts and ensure the efficacy of decisions and policies that are essential to the system's continued development.

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