

A hand is shown from the left, holding a pile of dark coal dust. The background is a blurred, snowy forest scene. The overall tone is somber and environmental.

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Slow death in Siberia

How Europe's **coal** dependency is devastating Russia's forests and indigenous **Shor people**

Slow Death in Siberia – How Europe’s coal dependency is devastating Russia’s forests and indigenous Shor people

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May 2018

Acknowledgements

Thank you to everyone we met in Siberia. In particular to Valentina Boriskina, Valentina Mitrochina, Valentina’s Husband, Alexej and Andrej, Larissa Myzhakova, Yuri Myzhakov, Alexander Myzhakov, Alexander, Yana Tannagacheva, Vladislav Tannagachev, Viacheslav Krechetov, Svetlana, Victor Kleutin, Luba and Alexander Arbachakov, Lydia and Sweta from Ene Tag and the villagers living in the Shorsky National Park who showed us the serenity of the intact taiga.

Also thank you to the London Mining Network, Anton Lementuev and Vladimir Slivyak from Ecodefense and our amazing translator and researcher Ekaterina S. The project wouldn’t have worked without each and every one of you. Thank you for letting us into your homes and your lives and for showing us your world.



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Black snow. During winter when snow starts to melt, a black layer becomes visible where coal dust has accumulated.

Photo: Vladimira Salnikova

Executive summary

On the map of Russia, Kuzbass in southern Siberia nestles roughly above Mongolia and Kazakhstan.

It's an area few Europeans know much about, and even fewer visit. But it's a place most of us are inextricably linked to.

For despite Europe's shift towards renewable energy, coal from southern Kuzbass provides electricity which lights and heats homes, powers transport, and helps drive economies across our continent.

Kuzbass is the epicentre of Russia's expanding coal industry: around 76 per cent of Russia's coal exports come from there, and much of it is eventually shipped to European ports and converted into energy in Europe's power stations.

At the end of 2017 this report's authors travelled to Kuzbass to follow up investigations on the impact of coal mining in the region conducted by the Russian non-governmental organisation (NGO) Ecodefense.

Kuzbass's coalfields lie some 6,500 kilometres from Brussels, but what the authors found could be from another time, evoking the wretched conditions that characterised the coal industry in the 19th century.

First, there's the environmental impact.

Coal mining has razed forests, blackened rivers, contaminated the air with dust, and created waste mounds. Those who live there say the region has become a moonscape from which many are desperate to escape.

Then there's the human cost.

At the heart of this report are the testimonies of the indigenous Shors, a Turkic people whose survival and beliefs are intimately tied to the nature around them, but whose ancestral lands and villages have been ravaged by mining, leading, many say, to the slow death of their culture and way of life. It's estimated that in seven years, the Shor population of the region has declined by almost 50 per cent.

Yet they do not bear the cost of coal mining alone.

All who live in the vicinity of the mines are prey to their impact. Official statistics reveal increases in tuberculosis, cardiovascular diseases, maternal and child illnesses and a shortened life expectancy. The paradox, though, is that many locals' livelihoods are dependent on the mines that are causing them such harm.





Photo: Slava Stepanov

Finally, there's the effect on the climate.

Coal is the single biggest contributor to man-made climate change. Deforestation accounts for up to a tenth of current carbon dioxide emissions.¹

So destroying forests to make way for coal mines in Kuzbass is a 'double whammy' in climate terms.

Those who consume Kuzbass coal must not turn a blind eye to its impact. According to the Siberian Customs Administration, of the top 22 destinations for Kuzbass coal, 11 are in the European Union. In fact, according to the same source, more than half of all the coal exported from there ends up in the EU, with the United Kingdom, the Netherlands and Germany among the prime markets.

Coal's days, we're assured, are numbered. Averting catastrophic climate change means urgently ending our fossil fuel addiction. For the vast majority of those who the authors interviewed in Kuzbass, this cannot happen soon enough.

¹ If forest degradation is accounted for, the figure is one sixth of global carbon dioxide emissions. The contribution of land cover change to global warming between 1850 and 2010 was 40 per cent. See: <https://www.atmos-chem-phys.net/14/12701/2014/acp-14-12701-2014.pdf>





Russia is the world's **SIXTH** biggest coal producer after China, India, the United States, Australia and Indonesia.

Russia is the world's **FOURTH** biggest emitter of carbon dioxide (CO₂) from fossil fuels, but it still has not ratified the Paris Climate Agreement.²

The country ranks **THIRD** in global coal exports behind Australia and Indonesia.

Russia has the largest area of tree cover in the world with **882 MILLION** hectares of forest, which amounts to about a **FIFTH** of the global forest area.

Between 2001 and 2016 Russia **LOST** more forest than any other country in the world.

² In 2016 Russia released 1,645 million tonnes of CO₂ from fossil fuels. See: <http://globalcarbonatlas.org/en/CO2-emissions>

Russia's deadly coal embrace

"We must be able both to maintain and to significantly extend our presence in the market"

Vladimir Putin



Photo: Slava Stepanov

On 24 January, 2012, Russia's then Prime Minister Vladimir Putin announced that subsidies of €53 billion would be pumped into the nation's coal sector to meet growing demand.³

"We must be able both to maintain and to significantly extend our presence in the market," he said, adding that not long ago, some had proposed closing the industry altogether.

"People still say from time to time that the coal industry, or the machine-building or the automobile industry hold no promise, suggesting that we close them down and retreat into the taiga,⁴ where we will live by picking mushrooms and berries. But the coal industry is clearly

3 Putin said: "As I said, today we will consider one more key issue, one more strategic document – the long-term strategy for the development of the coal industry until 2030. . . Total financing under the programme is estimated at 3.7 trillion roubles, including 251.8 billion in budget funds." Other sources suggest the actual amount of financing for the coal sector is more in the region of 7 – 8 billion Euro.

4 The taiga, also known as boreal forest, is a biome characterised by coniferous forests. See: <http://www.bbc.co.uk/nature/habitats/Taiga>

gathering momentum... In 2011 the Kuzbass mines produced over 192 million metric tons of coal. This is a quarter higher than the record figures of the Soviet period.”⁵

Since this speech, Russia’s support for its coal sector has paid dividends.

Against a global backdrop of sharp decline – and a growing number of international organisations divesting from fossil fuels – Russia increased coal production in 2017 by three per cent compared to the previous year, and is now the world’s third largest coal exporter. The damage has been incalculable: to the climate, to forests and to peoples.

Coal heartland becomes a wasteland

Russia has the second largest proven coal reserves in the world, enough to last 500 years at current levels.

The bulk of these deposits are in the Kuznetzk Coal Basin – often abbreviated to Kuzbass – an area which mostly lies within the Kemerovo Oblast (region) in southwest Siberia.⁶

Kuzbass provides 59 per cent of Russia’s total coal, and the coal sector is the region’s main economic driver. In 2017, coal production in Kuzbass rose by 6.2 per cent on the previous year.

Meanwhile 76 per cent of the 240 million tonnes of coal Russia currently exports annually comes from Kuzbass, with more than half of it going to the EU. The main importers of Russian – and therefore Kuzbass – coal in Europe are (in descending order) the United Kingdom (UK), the Netherlands, Germany and Poland. (See *EU complicity section on page 32*)

Three factors intensify the impact of this relentless coal extraction on the people of Kuzbass.

First, Russian mining companies intentionally mine close to existing population centres, rather than in less populated areas. This cuts infrastructure costs – including roads, railways, electricity grid and water mains, as well as available labour – as well as provides readily-available labour.

Second, the coal mines of Kuzbass are not backfilled. Backfilling is when materials such as rock, subsoil, industrial slag and coal waste which has been removed in the mining process, are placed into the void created by earlier coal extraction. Without backfilling, a much greater area of land is destroyed to extract coal.⁷

Third, 70-80 per cent of mining in Kuzbass is opencast.⁸ The hazards of underground mining are well-known, and include perilous working conditions for miners and occupational illnesses such as respiratory diseases. But opencast methods bring their own dangers: threatening the health of those who live nearby, as well as the surrounding environment, with air, water, soil and noise pollution. This is exacerbated if pollution prevention technology isn’t used or biodiversity and ecosystem restoration programmes aren’t carried out.

5 In the same speech Putin pointed out that Kuzbass production reached its peak in 1988 with 153 million metric tons. This was exceeded in 2011, when the area produced 192 million metric tons.

6 Coal reserves are widely scattered throughout Russia: mining operations are taking place in 22 coal basins, spread across 25 constituent entities. However, the largest part of the coal deposits is located in the Far East region (30 per cent) and Siberia (64 per cent), the bulk of which is located in Kuzbass.

7 Backfilling is practiced in the UK and Germany. Russia appears to be unique in not following this.

8 As a result, each year underground mines are closing because companies prefer to use cheaper opencast methods at the expense of the region’s environment and inhabitants. For instance, in 2013 there were 85 underground mines and 121 open-cast mines in the country. In 2016 the total was about 60 underground mines and 131 open-pit mines, of which 56 underground mines and 36 opencast mines were located in the Kuznetsk Coal Basin alone. Today, 70 per cent of Russian coal is produced in opencast mines.

For the indigenous Shors of Kuzbass – as well as many of the area's other inhabitants – this has led to displacement and the unremitting erosion of a life built around hunting, fishing and gathering.

As heavy industry has infected every part of the landscape – from the mines themselves to transport infrastructure, electricity wires and water pipes, waste mounds and contaminated waters – whole villages have disappeared.

Key areas referred to in the report

Kemerovo Oblast: one of Russia's 46 administrative regions. An area of 95,500 square kilometres located in southwest Siberia.

Kuzbass: otherwise known as the **Kuznetsk (coal) basin:** One of the largest coal mining areas in the world, most of which lies in Kemerovo Oblast.

Kurya: A predominantly Shor village which was destroyed after the opening of the Sibirginsky mine in 1971. Around 150 households were displaced.

Kazas: Another Shor village in Kuzbass which was destroyed in 2012 to make way for mine expansion.

Chuvashka: The last predominantly Shor village in the Myski District, the focus of this report.

Myski: The nearest town to Chuvashka and the administrative centre for the district.



Source: Google maps

The last Shor village in the Myski district

Chuvashka is the last Shor village in the Myski district.

Its residents fear it will suffer the same fate as other Shor villages which have been wiped out by mining.

In 1971 the Sibirginsky mine began operating on the banks of the river Mras-Su. One hundred and fifty households in the village of Kurya were displaced, many of them moving to Chuvashka.

The Shor writer Veniamin Boriskin later recalled: “They immediately tore down a large Shor settlement, Kurya, to make way for coal extraction. Before our very eyes, on either side of the river Mras-Su they started removing the mountains which for centuries had fed the Shor people. Blasts were thundering, shaking the surroundings. The house was shaking. In the gardens, the vegetables began to wither early.” Even the remains of the dead were disturbed when the local cemetery was destroyed.

Following Kurya’s obliteration, coal mining operations continued to expand over the decades, and other villages were abandoned.⁹

The nearby predominantly Shor village of Kazas was threatened for years. As opencast mines edged closer to it, sacred sites were flattened, including the Karagay Lyash – the Shors’ Mother Mountain, which had huge spiritual significance.

Living conditions in Kazas became unbearable. Sicknesses increased. The fresh streams where people retrieved water and caught fish were undrinkable. Coal dust coated their garden vegetables. Explosions became the soundtrack to their lives. The mining company even set up a checkpoint at the entrance to the village.

When Kazas eventually vanished in 2012, some of its survivors moved less than two kilometres away to Chuvashka, the village this report focuses on, and which today has a Shor population of 199.

The authors’ first impression of Chuvashka stayed with them throughout their time there: the overwhelming stench of coal. It saturates everything, permeating hair and clothes, leaving a pungent taste in the mouth.

What follows is the testimony of those who live with this every day – and for the most part – have little chance of leaving.

⁹ To this day, the former inhabitants of Kurya have not received any alternative land nor adequate compensation and have been provided no redress for the destruction of their sacred mountain.

“It feels like these souls
have turned their backs
on me”



Valentina Boriskina

Photo: Sally Low

Valentina Boriskina, a former school teacher, lives alone on her pension in Chuvashka. She is one of the last Shor speakers in the village. Her grown-up children live in Mezhdurechensk, 25 kilometres away, where they work in underground mines, since other jobs are so scarce. In front of Valentina's house is the Sibirginsky mine. At the side is a waste tip from another mine.

“OUR VILLAGE is surrounded by coal mining, and the dust which blows from the mines and waste heaps coat everything.

I used to collect plants from the taiga, including Kolba, a wild onion with nutrients which keeps us healthy in winter. Now I buy them at the market. We used to eat deer, rabbits and bear from the forest. These animals are no longer here. I don't want to go into the forest anymore because it is so impoverished.

The water is the worst. It comes from a pipe, but it is undrinkable and smells like rotten eggs.¹⁰ Before the mining started we drank the water from the river Mras-Su but it's been polluted. The head of the Myski authority said they would bring drinking water in 2017, but it hasn't arrived.

The mines also have a big impact on our health. My teeth have fallen out and my hair is thinning too.

If the mining companies have their way, Chuvashka will be destroyed. Eight other Shor villages have already disappeared.

The Shors are children of nature, completely in tune with the land. We believe that the forests, rivers, mountains, plants and soil all have souls. But mining has destroyed all of this and so destroyed our culture. It feels like these souls have turned their backs on me.

Our culture was [also] changed by the Soviets. In the Soviet times we were regarded as uneducated, illiterate, without language and incapable. They brought gulags to this area and [transported] people they had arrested far away to fill them. They used the prison labour to start logging here. Many prisoners stayed after they were released.

The administration said that the last Shor school book was eaten by a cow, that is how much they care about teaching in our language.

These newcomers brought a subculture of cigarettes and strong alcohol consumption. Shor culture was never like that before. My father never smoked or drank, but my brothers did. Before the camps the Shors only drank at celebrations and then it was weak homemade alcohol.

My people used to dress very richly with large ornate jewels and pearls. But even by my parents' generation people had stopped wearing these things. I haven't got any of these things as my family had to sell them when times got hard.

¹⁰ In January 2018 there was a [report](#) that a new water filter system had been commissioned in Chuvashka.

Although our village is predominantly Shor, most people don't speak the language.

When I took the bus I used to speak with my friends in Shor, but other people would abuse us for doing so. We were still speaking Shor in 2013, but now I have no one to speak to in Shor and I would be afraid to. Shor is my mother tongue, but I start to lose it with lack of use. I can't remember all the words any more.

We used to get official documents in the Shor language. There were schools which taught in Shor, but these have closed. The administration said that the last Shor school book was eaten by a cow, that is how much they care about teaching in our language.

Since 1990 we have had the law to protect minority peoples, but it is merely a public statement. The only law which actually works is the law of power.

Our culture has been reduced to festivals for show only. The administration has taken everything except for beauty contests and kids parties where people dance and drink. This isn't Shor culture. We have no rights or decision-making, our culture is a joke to them.

We have no escape-door, there is nowhere else for us to go. I'm tired. Fighting the coal company as well as looking after my house at my age is difficult. Life in Chuvashka, especially in winter is hard. We burn coal from the mines on our stoves, but keeping the fire going requires a lot of work and I'm not young any more. I have scratches up my arms from the work, and from chopping wood. In winter I will also have to clear the snow so I can get out of my house. I want to sell my house and leave this village but the mining company doesn't want to buy it. Who else would?"

The Shors: a brief history of an endangered people

At least **180 groups** of indigenous peoples live in Russia, but the rights of only **40** of them are guaranteed by the country's constitution.¹¹

In 2000, the Shors' rights were included in the list of those protected.¹² They are one of the few indigenous peoples in the Kemerovo region, others include the Teleuts.

While the Teleuts are traditionally livestock farmers, the Shors (or *Tadar Kiji* in the native tongue), live further south, and have relied more on hunting for their survival.

Historically they were famed as blacksmiths, and in Imperial Russia their metal work was traded all the way from the Black Sea to Russia.

The Shors are shamanist and animist, believing that mountains, streams, forests and soil have souls.

11 Article 69 of the Constitution of the Russian Federation states: "The Russian Federation shall guarantee the rights of the indigenous small peoples according to the universally recognized principles and norms of international law and international treaties and agreements of the Russian Federation."

12 The criteria for being considered Shor since the 2017 RAIPON's (The Russian Association of Indigenous Peoples of the North) official decision, are: belonging to an indigenous numerically small people which may require specific allocation on your birth certificate; observing indigenous traditions, engages in horticulture, in collecting wild berries and mushrooms with their processing, in fishery or hunting; and living on a territory of traditional inhabitancy. See: [Indigenous Peoples in Russia](#)

While their beliefs have evolved over time, their deep connection to nature remains.

But their territory's rich natural resources – in particular the massive coal deposits beneath the ground – have been a curse as much a blessing.

The Soviets incarcerated people in the gulags of Kemerovo Oblast (and across Siberia): forcing them to log the taiga and work in the coal and iron ore mines.

Throughout the 20th century, the Shors saw the pendulum swing from having greater to lesser autonomy over their affairs.

Initially, the Soviet Union pledged to respect ethnic peoples' rights to self-determination and a Mountain Shor National District was created in 1926 to enable Shor culture to thrive.

In 1943, Kemerovo Oblast (the federation in which Kuzbass lies) was developed with the goal of expanding metal and coal production. Non-indigenous workers flowed into the area resulting in a vast demographic change and the dismantling of the Shors' self-administration. From the late 1930s to that late 1940s, the Shor population of the region decreased from 70 per cent to 10 per cent, from ten years before. Since then, the population has continued to fall.

According to Russia's 2010 census, there were 12,888 Shors in the entire country, with 10,672 living in the Kemerovo Oblast.

Today, however, it has been estimated that the number of Shors living in the region has fallen to between 4,500 and 5,000.

As the Shor population has withered, so has their language, which is now only heard in small settlements and is barely taught in schools.

In May 2015, a submission to the United Nations (UN)¹³ by the Danish-based International Work Group for Indigenous Affairs (IWGIA), the local NGO "Revival of Kazas and the Shor people", and the Institute for Ecology and Action Anthropology (INFOE), highlighted the price exacted on the Shors by coal mining:

"The encroachment of mining onto indigenous peoples' lands has brought devastation, relocation, dispossession, desecration of sacred sites and homelessness to the Shor community of Kazas, Kemerovo Oblast. It has also caused the destruction or decay of other Shor communities, such as the village of Kurya, and threatens the future of other Shor settlements, in particular Chuvashka, putting the very survival of the Shor language and culture at risk."

Russia is among the few UN member states that have yet to formally endorse the UN Declaration on the Rights of Indigenous Peoples.

13 See: Discrimination against Shor communities in Myski municipal district, Kemerovo Oblast, Russian Federation Committee on the Elimination of all Forms of Racial Discrimination (CERD), 86 Session, 27 April – 15 May 2015. CERD is the body of independent experts that monitors implementation of the Convention on the Elimination of All Forms of Racial Discrimination by its State parties.

"All the forests have been cut down... Animals can leave but people can't"

Alexander Myzhakov

Photo: Sally Low



Alexander Myzhakov used to work in the Mezhdurechensk opencast coal mine. He lives in Chuvashka in the house he shared with his wife who died recently. Like him, she was Shor.

“A **S A CHILD** I lived in Kurya with my grandmother. There was no work in our village, but that didn't matter as we could live off the land. We tended the garden and grew potatoes and vegetables.

My grandmother knew a lot about herbs for health. When I was a child I didn't listen to her, now I would love to know the entire process like she did. Finding the plant, preparing it, knowing how much to take when, these are the things she knew and I don't.

When Kurya was destroyed to make way for the Sibirginsky opencast coal mine my family moved to Chuvashka [less than 4km away].

In the 1990s there was a lot of unemployment as all the factories started closing. Eventually I found work in the Mezhdurechensk opencast coal mine. I had to work there even though opencast coal mining destroyed the village where I first lived.

When the wind blows after an explosion you can see the pollution in the atmosphere. The explosions, the pollution and the chemicals are damaging us. It concentrates in our organs, you can't see all the toxins, only the dust. My kitchen is cracking [because of the explosions]. There was a long crack down the stove which I use to heat the house and to cook on.

Last year a family in the village got sick from drinking the river water. The Mras-Su River is completely black, and cultivation is very difficult.

The mines have brought deforestation. All the forests have been cut down.

Animals can leave, but people can't. I don't know what will happen to this village. The coal company tell us nothing. They just pay the administration for our land. This is supposed to be the Shor nations' land.

The Shor traditions are lost as the old people die. The young people don't care about them. In the mountains there are ruins of other villages which have been abandoned.

A long time ago there were traditional Shor storytellers. The whole village would gather on winter evenings when there was no work. The storytellers would wear traditional clothes and the stories might last a week.

The storytellers spoke of people living from the land, beneath the sky. Whether the stories were myths, legends, real or imagined nobody knows.

People tried to write it down but it was an oral tradition. The old people died and the knowledge was lost.

When I was younger I used to play the Shor lute and also the guitar. I can't play either now, my hands are too stiff.

Historically there were blacksmiths amongst the Shors. Then it was forbidden on punishment of death. The minerals are all still here, but no-one does it any more. The people near here supplied the arms to Genghis Khan, my grandfather used to talk of it. The Shors had their own traditional ways to work the metal but the knowledge is long forgotten.

There have been initiatives against the mines. We tried to defend Kazas, but the houses people refused to sell were burnt down, although the culprit was never found. We contacted the company's owners, but they didn't listen. We went to the judiciary and to Putin. Putin says that it is a regional issue and so it should be solved here.

I hope that the mining will stop, but hope eventually dies. I don't really believe it will stop as the oligarchs know there is still money to be made. It's easier money than opening a factory.

To the people who ultimately consume the electricity produced I'd say use alternative energy sources and modern technology. I understand that energy is needed but there must be other ways than by opencast coal mining. Coal may be needed but the costs of exploiting it are too high and it is destroying people's means of subsistence.

If the mining companies would listen I would tell them that the mines need to be closed down. The owners of the companies need to stop chasing the rouble and protect nature and people, not destroy it all by taking the resources. There is no deficit of coal, but there is a huge deficit of untouched nature, ecology and clean water.

We could all move out of Chuvashka and leave it to them. But this is my land and I was born in it. There is a licence for a mine here in the village and how long we can stay is all about timing. Our village can all be demolished in a day, when they decide to exploit the coal under it. I don't know when this will happen.

This feels hard, but what use are feelings. What can I do with those?"

I hope that the mining will stop, but hope eventually dies.
I don't really believe it will stop as the oligarchs know there is
still money to be made. It's easier money than opening a factory.

The environmental and health costs of Kuzbass coal



Photo: Sally Low

“The coal industry is choking people out of the region, soon we will be like rats, leaving a sinking ship... An official expert came to assess the environmental pollution caused by the mining activities. We showed her the 10 centimetres of coal dust left by the melted snow and she responded that it was coming from our stoves and chimneys even though we had the Court’s judgement certifying otherwise. In the spring when children are coming back from playing outside in the lawn, they’re covered in soot from the knees down”. Valentina Mitrochina, Myski resident.

- Official statistics reveal that the concentration of chemical elements in the soil around Kuzbass’ mines exceeds Russia’s health standards by 8.9 per cent. In two years, the area of contaminated soils in the Kemerovo region grew by 20 per cent.
- The Coal Atlas (2015) reports: “In the Kemerovo region alone every year over 1.5 million tonnes of pollutants are emitted into the atmosphere, and over half a million cubic meters of polluted wastewater are discharged.”
- According to a 2011 report, the average number of harmful air pollutants in the Kemerovo region were two or three times higher than Russia’s allowable maximum. On a number of occasions, they exceeded these limits by as much as 18 times.¹⁴
- “The atmosphere in Kemerovo Oblast’s cities is polluted by particulate matter, and drinking water is contaminated by metals. Locally produced food has excessive concentrations of lead, cadmium, mercury, and arsenic... Kemerovo region saw a 19.4 per cent rise in disease incidence and 19.7 per cent increase in mortality in 1993–2006.” United Nations Development Programme (UNDP), National Human Development report in the Russian Federation (2009)
- One measure of the alarming levels of air pollution in Kuzbass, is the phenomenon of black snow. During winter when snow starts to melt, a black layer becomes visible where coal dust has accumulated. Sulphur compounds, nitrites, nitrates, chlorides, potassium and manganese have been found in the region’s snow.

14 Kemerovo Oblast administration’s report also refers to air pollution, but only assesses the air conditions of three cities. In Novokuznetsk for instance, the air pollution is classified as “very high” while in the city of Kemerovo it has “increased” (the levels being: *low – increased – high – very high*). The nearest city to Chuvashka, Novokuznetsk is located in a low-lying valley area where substances emitted by the metallurgical industrial plants, the coal particles and the smell aren’t carried away by the wind, thus forming a photochemical smog. State statistics identified the city as the third most polluted place in the Russian Federation. Data for the rest of the region is unavailable due to a lack of environmental monitoring stations as the Russian Federal Natural Resources Management Regulatory Service, Rosprirodnazor admits. However, it is possible to find some answers in Court judgements. Most residents can’t afford to bring a case in front of the town court every time a mine violates the law, however they manage to do it from time to time. One of these resulted in a favourable verdict issued by the Myski town Court of the 12 October 2016 (affair n°2 – 1464/16). The Court held that the Kiyzasskiy mine was responsible for overall gross emissions of air pollutants in 2015 amounting to 383.8 tonnes, of which the loading and unloading operations’ emissions count for around 18.5 tonnes per year. Mining activities discharge eight pollutants: coal dust, nitrogen dioxide, soot (or black carbon), sulphur dioxide, carbon monoxide, kerosene and another undetermined element. Explosions and drilling operations, stripping work, coal extraction, triage, waste dumping, storage, loading and unloading work, transport, and machines are all sources of air pollution.

“Myski used to be one of the greenest town in the Kemerovo Oblast. When they retired, inhabitants from the region would move to Myski – a clean place with fresh air. We started to see the changes in the late 2000s... Massive loaded trucks are passing on the same road that children take to school and from which coal dust is falling, poisoning everyone’s gardens and developing in the entire town... As of today it is no longer possible to live in such conditions.” Viacheslav Krechetov, Myski resident.

- The largest of Kemerovo Oblast’s 32,000 rivers, is the Tom River. According to the Kemerovo Oblast administration’s official report on the region’s environment, the entire length of the river is contaminated. Its waters contain high concentrations of oil products, phenols, nitrite nitrogen, ammonia nitrogen, iron, manganese and copper. The waters are mostly contaminated by the untreated discharges from mines, industrial plants and municipal sewage.
- The average Russian life expectancy is 70.5 years (64.7 for men; 76.3 for women). In the Kemerovo region as a whole, life expectancy is three to four years shorter.
- Cancer rates have risen by 11 per cent in ten years in the Kemerovo region.
- Official health statistics also show an increase in tuberculosis, maternal and child illnesses, cardiovascular diseases and occupational illnesses.
- According to official data, only three out of a hundred Kemerovo region inhabitants have satisfactory housing conditions.



“No tree can survive without roots. If they destroy Chuvashka, what is our reason to live?” Larissa Mizhakova, Chuvashka

Photo: Sally Low

A double whammy for the climate: clearing forests for coal

“We believe that the forests, rivers, mountains, plants and soil all have souls. But mining has destroyed all of this and so destroyed our cultures.” Valentina Boriskina, Chuvashka.

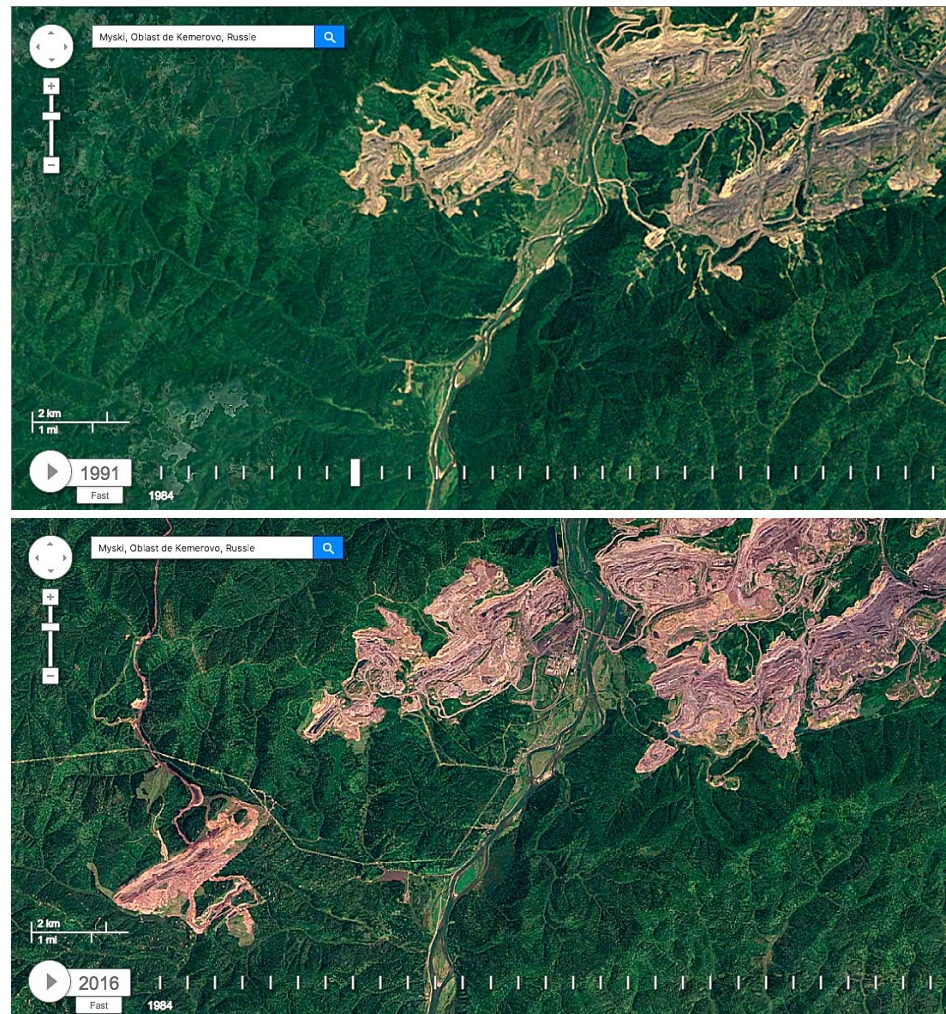
In 2015 Fern used Geographic Information System (GIS) data to reveal that at least 11.9 million hectares of forest globally – an area the size of Portugal – was at risk from coal mining.¹⁵

This represents a double jeopardy in the fight against climate change – with emissions released into the atmosphere from burning coal, as well as from felling trees.¹⁶

The message was as clear then as it is now: We have to keep coal in the ground and forests standing to have any hope of achieving the aims of the Paris climate agreement.

Yet, as disturbing as it was, the report only gave a partial picture: the amount of forest facing destruction from coal mining is much greater, since GIS coal data for two of the world’s biggest coal producers – China and Russia – was unavailable.

These two google maps graphically show how forests have been destroyed as coal mines have relentlessly expanded. The brown patches which surround mining areas on the second map (from 2016) are far greater than those surrounding mines a quarter of a century before (1991).



15 The Report, *Double Jeopardy: Coal's Threat to Forests* overlaid Geographic Information System (GIS) data of coal mine concessions and forests from around the world.

16 Estimates of the global emissions caused by deforestation vary. In 2007 the Intergovernmental Panel on Climate Change estimated that 17 per cent of global emissions were the result of deforestation.

Russia has the biggest area of tree cover in the world with about 882 million hectares of forest, amounting to around a fifth of the globe's forest area.¹⁷

With around 32,800 million metric tonnes of carbon stocks in living forest biomass, Russia's forests play a crucial role in storing carbon away from the atmosphere. Furthermore, its forests absorb almost twice as much CO₂ annually as the EU's forests combined: 635 million tonnes in 2015. But this forest is disappearing at an alarming rate – and as it vanishes, so does its capacity to mitigate climate change.

Russia leads the world in deforestation: between 2001 and 2016 the country lost more forest than any other – during this period it lost 49.51 million hectares (Mha) of tree cover, followed by Brazil (46.37 Mha), and Canada (36.01 Mha). And in the taiga of southern Kuzbass, a major driver of this is coal mining.

The taiga here is a low density forest, and populated with cedar trees, birches, Siberian pines and larches. Wolverines, foxes, lynx, sable, brown bears, red deer and roe deer all run wild, and the area is biologically diverse. It had been blessed with wetlands, streams and wide slow-moving rivers.

According to Ecodefense, for each tonne of coal produced, six hectares of land are disturbed.

This destruction of forests and other natural habitats for coal mining represents as much a spiritual as a temporal loss for the Shors.¹⁸ The testimony of those we interviewed on the extent and significance of this loss is corroborated by the maps below.

Since the start of the millennium, the region lost over 72,000 hectares of tree cover: that's an area twice size of Malta.

This map shows the licenses for future mines and how their expansion will destroy more forests. The yellowish sections are the areas which have been licensed (between 2004 and 2016), all of which overlap with existing forest. The light green sections show the potential/future new mining areas (open-cast and underground).



17 According to the UN's Food and Agricultural Organisation (FAO), The Russian Federation Forest Sector, Outlook Study to 2030 (2012): "The total area of forest land in the Russian Federation in 2010 was 882 million hectares. By 2030 it will increase by 0.9-1.5 percent, depending on the scenario. . . . Total carbon stock without soil organics in 2010 was over 50 billion tonnes. According to the forecast it should increase by 2030 by 2-4.7 percent."

18 When a mining company starts logging, selling timber is not necessarily of interest to them. Massive numbers of birch tree trunks can be found in the vicinity of the mines. Some companies remove cedar logs for selling but others do not bother.

“We [*the Shors*] aren’t the only ones suffering from it [*coal mining*]. The entire Kuzbass is crying”



Alexander Myzhakov and Larissa Myzhakova

Photo: Sally Low

Larissa Myzhakova was born and raised in Chuvashka. She now lives in Myski, but frequently returns to Chuvashka and the house where she was born. She is married with children.

“WHEN I WAS a child there were eight of us in the house, we slept wherever we could. I was born in the main room and I want to die here.

Everyone is working in the mines. Shor and Russian, we all depend on mining to put food in our mouths, but at the same time they [the mines] are killing us.

We [the Shors] aren't the only ones suffering from it [coal mining]. The entire Kuzbass is crying.

The life expectancy of my family and our community is decreasing with the coming of the coal mines. My grandfather lived to 104, my father died at 67. But my sister has just been sent home from hospital with stage four cancer. The doctors say there's nothing that can be done. She's only 46. We think that the cancer is because of the ecological situation here. She's breathing dirty air and drinking polluted water.

My father was a fighter. He fought for this area against the mining company and for the Shors' rights. He is my inspiration. He was at the forefront of saying “No” to the mining company. They came and offered him a mountain of gold, but he always chose his children and his little homeland. I want to walk in his footsteps and pursue his work – what he wasn't able to finish during his lifetime.

There must be and a total ban on the opening of all the mines established on the Shors' territory, and a ban on the opening of new open pit mines on our land. I am also fighting for a law which will protect the surrounding environment and prevent exploitation of the taiga from coal mining. I have to fight for these things in my father's memory because my children won't do it later.

“My father was a fighter. He fought for this area against the mining company and for the Shors' rights. He is my inspiration.”

There used to be a spirit in the forest, we were brought up knowing that we weren't allowed to raise our voices in the forest or we would upset its soul.

I think the souls of nature have left because of the mining and all the explosions to get the coal. When I hear the blasting [from the mines] I feel like my soul is exploding.

Even three years ago I took my family to the Balshoy Kizas river, but now it has turned black [with coal dust and waste]. There is a lake where we used to swim, now I wouldn't even touch the water, it is oily and so polluted from the coal which runs off the Kiyzasskiy mine.

My children have decided to leave this place, our native lands, because of the very bad ecological situation. But I will remain here and won't go anywhere. Why should we have to go to other lands? This is our territory. We are the indigenous people. What tree can survive without roots? If they destroy Chuvashka, what is our reason to live? These are the questions that each and every one of us living on a land of coal should be asking ourselves.

We often speak about principles of Free, Prior and Informed Consent but that's not how the mining companies operate.

I've been writing to the government and the mining companies making complaints about the situation here but I don't get any responses. I'll keep on writing to them until we get heard and we all sit around a negotiating table.

Our problems are similar to other indigenous people across the world. We are different peoples but we have the same issues of lack of decision-making for our lands and families, resource extraction and discrimination. While I am alive, I'll keep on combating the mayhem that is happening in our homeland."

Explosions occur a few times a day. They create cracks in villagers' walls and windows, leaving coal dust and unexploded chemicals behind.

Photo: Sally Low



Resistance and acceptance

“We receive death threats from the coalmen, saying that our children will become orphans if we do not shut our activities down. So far – knock on wood – no physical harm was inflicted on anyone. In any case, we do not intend to stop fighting for our rights”. Member of local NGO Revival of Kazas speaking anonymously.

On 23 November, 2016 Yana Tannagacheva, a Shor youth representative, gave an impassioned speech to the UN Committee on the Elimination of Racial Discrimination (CERD) in Geneva.

Understandably, Tannagacheva’s message – decrying the suffering of her people and the destruction of their land – is one that the local authorities and mining companies in Kuzbass are keen to refute. One of the measures they have taken to counter has been a federal-level commission which found that all was fine with the Shors’ situation.¹⁹

Given coal’s economic importance, it’s no surprise that those with a vested interest in it would seek to undermine evidence of its grim impact. Yet it’s also true that not every Shor person living in Chuvashka opposes the mines.

There’s a clear division between those who see mining as a major source of employment in the region (particularly in the wake of numerous factory closures), or who benefit from the coal companies’ largesse – and those who have been driven to resist the mines’ relentless expansion.

We met some of mining’s supporters at Ene Tag, a Shor cultural yurt which was built with money from the mining company. At Ene Tag celebrations are held honouring the sacred – but no longer existing – Karagay Lash (the Shors’ Mother Mountain).

“Due to civilisation our comfort levels have increased. Now every family has a car and can survive without having to go into the taiga to hunt as our meat is close to us. The coal mining development in this area has had an impact on the village, there are now jobs so it is a good effect.”

A woman there told us: “Due to civilisation our comfort levels have increased. Now every family has a car and can survive without having to go into the taiga to hunt as our meat is close to us. The coal mining development in this area has had an impact on the village, there are now jobs so it is a good effect.”

Those opposing the mines though, are far from passive in the face of their encroachment.

The Russian NGO Ecodefense has helped unite different communities affected by coal to find a coherent voice against it – and ingenious ways to protest.

¹⁹ Local groups supporting the mines include the *Associatsiya Shorskovo Naroda* (the Shors People Association), whose general arguments can be found (in Russian) [here](#). For a further example of the pro-mining case, see [here](#) (also in Russian).

Group demonstrations require permits from the authorities, and when locals have applied for them they are typically refused or given them for locations which don't exist,²⁰ so instead they have relied on single person protests. Since the demolition of Kazas in 2013, a one-person picket in front of Myski city administration office has regularly opposed the local mining company.

Those resisting the mines are calling for an end to opencast mining and restrictions which would mean that Kuzbass coal only meets Russian, rather than international demands.

As well as their pickets, locals have complained to the mining companies and the local administration, and fought to get environmental regulations adhered to, but to little avail as they find themselves endlessly passed from one official to the next.

Valentina Mitrochina, a healer who lives in Myski, has dedicated most of the last five years to fighting mining.

She explained: "Demonstrations were organised by the Shors [Valentina is not Shor], but I went along. I got other people from this town involved to stand up for this place, before the coal falls on our heads. To begin with people laughed at me, but now they know that it is good that I fight and don't give up. I am working at different levels, writing letters to all the people in the authorities, trying to get officials to see that the pollution controls are being broken," she adds.

"I got other people from this town involved to stand up for this place, before the coal falls on our heads. To begin with people laughed at me, but now they know that it is good that I fight and don't give up."

Those who speak-out face intimidation and threats.²¹

"The people are being forced from this area. There was a house in Tetenza which was completely burned down not far from the Kijzasskij mine. They sent the police in, there was an investigation and they said that it was juveniles. But it is the same as in Kazas, before it was cleared. Houses are burnt and there isn't a

proper investigation. We know who did it. There is no justice," said Mitrochina.

Yana Tannagacheva, who presented the Shor case to the UN, told us:

"There is repression here against us for raising our voices against the mining. When a representative of the United Nations came to visit Kuzbass they were followed by the mining company and stopped from seeing Kazas. Everyone is being intimidated, but the worst things have already happened to local people. In Kazas they had their homes burnt down."

Tannagacheva says that two years after approaching them, the UN made recommendations to Russia on its treatment of the Shors.

²⁰ For more information on these protests, see www.shoria.info

²¹ The report's authors glimpsed what those resisting coal mining in Kuzbass face during their time there. After photographing a mining company's compounds from a public road they were followed for the rest of the day. In the days that followed local police put pressure on the owners of their accommodation and later arrested one of the authors and the photographer and prevented them from speaking any further with Shors. Yet this is nothing compared to the ongoing intimidation faced by the local population opposing the mines.

“For us this is a small victory... Now and in the future we have to see about the implementation of the recommendations. It is difficult, it takes a lot of our time. But this is our life and we do it for our children and for a better future.”

Report by the United Nations’ Committee on the Elimination of Racial Discrimination (CERD), 20.09.17:

“...The Committee is concerned that, despite the information provided by the delegation, the rights of Shor people originally from the village of Kazas that was destroyed in 2012 have not yet been restored and that a resettlement plan has yet to be adopted. Moreover, the Committee is concerned that Shor people are prevented from visiting their original village, including their cemetery, because of armed checkpoints. Finally, the Committee is alarmed by the relocation of the sacred site of Shor people to another village, which was reportedly carried out by the State party without seeking the free, prior and informed consent of the concerned people... The Committee recommends that the State party take effective measures to restore fully the rights of Shor people, in close consultation with Shor representatives and bodies...”



“Everyone is being intimidated, but the worst things have already happened to local people. In Kazas they had their homes burnt down.” Yana Tannagacheva

Photo: Sally Low

“This is an escalation of the intimidation from the mining company. There didn't used to be threats of physical violence, now there are”



Viacheslav Krechetov is a journalist and film-maker who lives in Myski with his family. He spends much of his time campaigning for the Shors' rights. The series of short documentaries about mining's impact he's working on include Price (with English subtitles), which explores the destruction of the Shor village of Kazas by the mining company Yuzhnaya.

“THE SHORS were always the guardians of the forest. Environmental protection is in everyone from the Kemerovo region's blood.

[Destruction and coal pollution] isn't only [affecting] Shor people in Kuzbass, it is affecting us all. Most of the people living in Myski know that mining is death.

I was hired to make a TV programme here, but it was empty [shallow] and it was hard to go deep into a subject when I was [preoccupied] with what was happening to the Shors and the environment. Other media people don't do in-depth stories about what is really going on and that's what I wanted to cover. After I started to record the problems with the mines I was fired and I decided to help fight for the Shors' rights.

I was already working on the mining issue and made many videos. So when the NGO Ecodefense approached me I was happy to share footage with them. They made an excellent film 'Condemned' out of it. It shows the problems facing the Shors and our local environment, including describing the fires in Kazas which destroyed the houses of the people who refused to leave.

Today my colleague was followed in her car by a mining company when showing international visitors [the authors of this report] the coal processing plant. This [being followed when with the report's authors] is an escalation of the intimidation from the mining company. There didn't used to be threats of physical violence, now there are.

This is how we live. It's not pleasant to be shadowed like this. To go about your business and have people follow you around.

In 2013 there was a picket against the opening of new mines. Each person would take a turn to demonstrate. We didn't think that the companies would touch the indigenous Shor people because they are supposed to be protected. A few people – including Valentina Boriskina [see separate testimony] – stood in front of the big trucks to try to stop them.

We were trying to stop Kazas being destroyed, but through dirty tricks they forced everyone to leave and the village was completely destroyed by the opencast mine.

Lots of people have been bribed by the government not to fight the coal mines, but in reality we are all suffering because of coal mining.

This has been a long struggle, but we are stronger than the coal companies. It is a huge pressure, of course it affects my family, but I have ethics and I'm following God's principles to protect the environment.

Who buys Kuzbass coal: the EU's role in the destruction



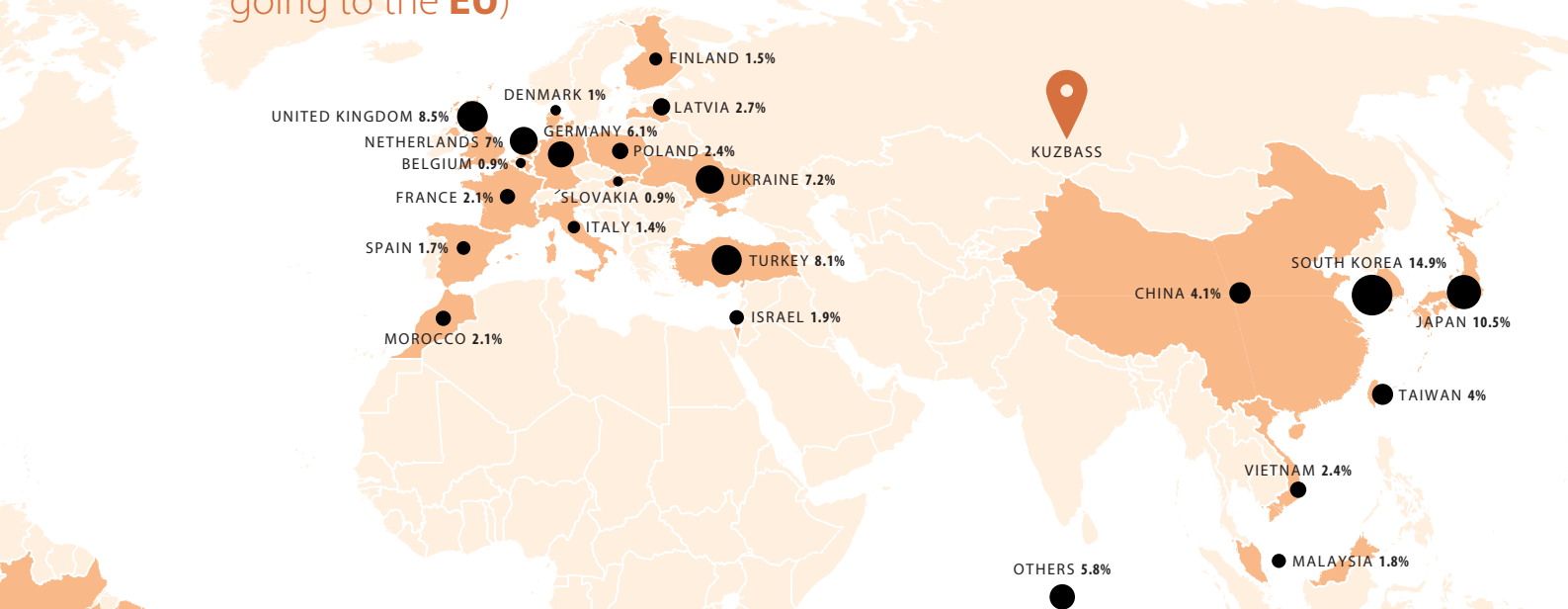
- In 2017 Russia's coal exports reached a record high: rising 13 per cent on the previous year, while the country's coal production rose by 6 per cent.²²
- At least 76 per cent of Russia's global coal exports are from Kuzbass.
- Coal from Kuzbass's desolate hinterland is finding its way to ever more corners of the globe.
- According to the Kemerovo Oblast administration, in 2016 the number of countries importing Kuzbass coal was **55**, while the following year it was **61**. Siberian Customs Administration's figures show some surprising markets. The **United States, Brazil, Pakistan, Sri Lanka, Lebanon** and even the world's largest thermal coal exporter **Indonesia** all import coal from the region. The largest importers of coal from Kuzbass are the EU, Korea, Japan and Turkey.²³
- Growing demand for Kuzbass coal – despite the high costs of delivery and vast distances involved in transporting it – is driven by its competitive price and purported high quality.
- More coal imported to Europe comes from Russia than anywhere else. EU countries combined represent Russia's biggest coal export market.²⁴ Most Russian coal imported into the EU is from Kuzbass.
- **11** of the top **22** countries that export coal from Kuzbass are in the **EU**.
- According to the Siberian Customs Administration figures, the **biggest European importers of Kuzbass coal** in 2016 were: the **UK** (the world's 3rd biggest importer of Kuzbass coal with **10.87 million tonnes (Mt)** in 2016); the **Netherlands** (the 6th biggest importer of Kuzbass coal in the world with **8.96 Mt** in 2016, and a major trading post for onward shipment); followed by **Germany** (7th with **7.75 Mt**); then **Latvia** (10th); **Poland** (12th), **France** (13th); **Spain** (17th); **Finland** (18th); Italy (19th); **Denmark** (20th); **Slovakia** (21th); and **Belgium** (22st). The German coal importer association, Verein der Kohlenimporteure, also confirms in its Annual Report that in 2016 Russia exported **11 Mt** to the UK and **17.8 Mt** to Germany.
- Interrogation of these Siberian customs' figures show discrepancies with official sources for UK and German coal imports. In the case of the UK, Her Majesty's Revenue and Customs (HMRC) state that total coal imports for 2016 – 2.3 Mt – are far less than the **11 Mt** that Siberian customs cite for exports from Kuzbass to the UK. For Germany, the situation is reversed. Official national figures show that the country imported 16.3 Mt of coal from Russia in 2016. Which suggests that far more of its coal came from Kuzbass than the **7.75 Mt** cited by the Siberian figures. Anomalies in coal export and import figures are commonplace in the industry.

22 See: Russia coal exports reach record high in 2017, Montel, 9.01.18.

23 In 2016 1.3 million tonnes of coal from Kuzbass was exported to the **United States** – a sharp increase on the previous year's total of 0.33 million tonnes ; 16 million tonnes of Kuzbass coal was exported to the **Middle East** and **North Africa**; and 60 million tonnes of Kuzbass coal went to **East Asia**; in **India**, coal imports from Kuzbass increased tenfold from 2007 to 2016: from 32,000 tonnes to 3.1 million tonnes. While **EU countries** combined still represent the biggest single market for Kuzbass coal, exports to **Belgium**, the **UK, Spain, Italy, Latvia** and the **Netherlands** have been falling (as those countries shift to alternative energy sources), while exports are rising to **Vietnam, Brazil, France, Morocco, Denmark, Germany, Korea, Japan, Taiwan, Poland, Slovakia** and **China**. See: <http://avant-partner.ru/rang/6947.html>

24 In 2016, according to Eurostat, Russia supplied 32.5 per cent of the EU's total coal imports. Colombia was the second biggest source of EU imports (23.2 per cent).

In 2017, **140Mt** of coal exported from Kuzbass (almost **40%** is going to the **EU**)



2016 coal exports from Kuzbass and Russia in million tonnes

	Destination	Kuzbass coal export (Mt) in 2016	Russian coal exports (Mt) in 2016
1	South Korea	19.07	26.6
2	Japan	13.46	18.7
3	UK	10.87	11.2
4	Turkey	10.37	11.5
5	Ukraine	9.22	9.9
6	Netherlands	8.96	9.2
7	Germany	7.75	8.5
8	China	5.3	17.3
9	Taiwan	5.17	7.6
10	Latvia	3.45	- ^I
11	Vietnam	3.1	-
12	Poland	3.1	5.3
13	France	2.72	-
14	Morocco	2.63	-

	Destination	Kuzbass coal export (Mt) in 2016	Russian coal exports (Mt) in 2016
15	Israel	2.46	-
16	Malaysia	2.3	-
17	Spain	2.15	-
18	Finland	1.88	-
19	Italy	1.73	-
20	Denmark	1.3	-
21	Slovakia	1.19	-
22	Belgium	1.15	-
23	Brazil	1.04	-
24	Others	7.38	-
	Total	127.75	
	Total EU	46.25	

^I Figures are not available for all countries. Source: <http://ac.gov.ru/publications/13700/>

Existing discrepancies between Russian figures and UK and German figures (2016-2017) in million tonnes

Importing EU countries	Kuzbass exports (MT) in 2016 ^I	Kuzbass exports (MT) in 2017 ^{II}	Russian export (Mt) in 2016 ^{III}	Russian exports (Mt) in 2016 ^{IV}	National coal imports from Russia (Mt) in 2017 ^V
UK	10.87	11.4	11.2	11.14	2.3
Germany	7.75	-	8.5	17.8	16.3

^I Source: Siberian Custom Office (2016)

^{II} Source: Kemerovo Oblast administration (2017)

^{III} Figures from the Analytical Center for the Government of the Russian Federation

^{IV} Source: Verein der Kohlenimporteure e.V. (2016)

^V Source: official UK and German figures

According to senior researcher Glen Peters: "The general view is that import data is better, because customs have an incentive to collect data for tax purposes. Export data is generally poorer, as very few countries tax exports. So, the difference between exports and imports is no big surprise." That said, the Siberian export figures largely tally with data from importing countries, except – notably – in the case of the UK where there is a sharp unexplained discrepancy between import and export data. HMRC indicated they are confident in their figures.

"I have to clean the house every day as it's covered in [coal] dust..."

The Siberian Customs Administration's figures offer a revealing breakdown of which countries are importing coal from Kuzbass, and in what quantities. Missing from this picture however, are the energy companies who are buying and burning it.

Although it's possible to build a partial picture from information that has seeped into the public domain (and to make informed assumptions based on the overall amount of coal imported from Kuzbass and Russia), this is symptomatic of the lack of transparency that prevents full scrutiny of coal supply chains.

One aspect of this, is the mixing of coal from different sources at ports, which can be used – as in the case of Kuzbass – as a smokescreen to mask the ecological and human rights abuses involved in its production.

Coal exported from Kuzbass to Europe mainly comes through the ports of **Murmansk** (northwest Russia), **Ust-Luga** (near St Petersburg), **Vysotsk** (in the Leningrad region) and **Ventspils** and **Riga** (both in Latvia).²⁵

To gain an insight into how coal from Kuzbass enters Europe, one of the authors and the principle photographer for this report visited the Strek coal terminal in Riga where much of the coal from Kuzbass enters Europe. By the port they were approached by a young mother whose baby was just a month old, and who lived right next to it. She beckoned them into her home. She didn't want to be identified, but did want her story told. Her words bear many of the hallmarks of the testimony the authors heard in Kuzbass – and show that the health impacts of coal, and its disruption to people's lives – does not end where it is produced, but continues right along its supply chain.

Young mother in Riga living directly opposite Riga's Strek coal terminal

"I suffer with asthma. I have to clean the house everyday as it's covered in dust from the port. This is where my daughter will learn to crawl and I will have to work hard to make sure she isn't crawling in coal dust. The trucks going to the port terminal shake our house as they rattle past our home. The road is immediately outside of our door and the wall of the port is just over the road. The machines on the port are beeping all the time and they are throwing coal dust up into the air."

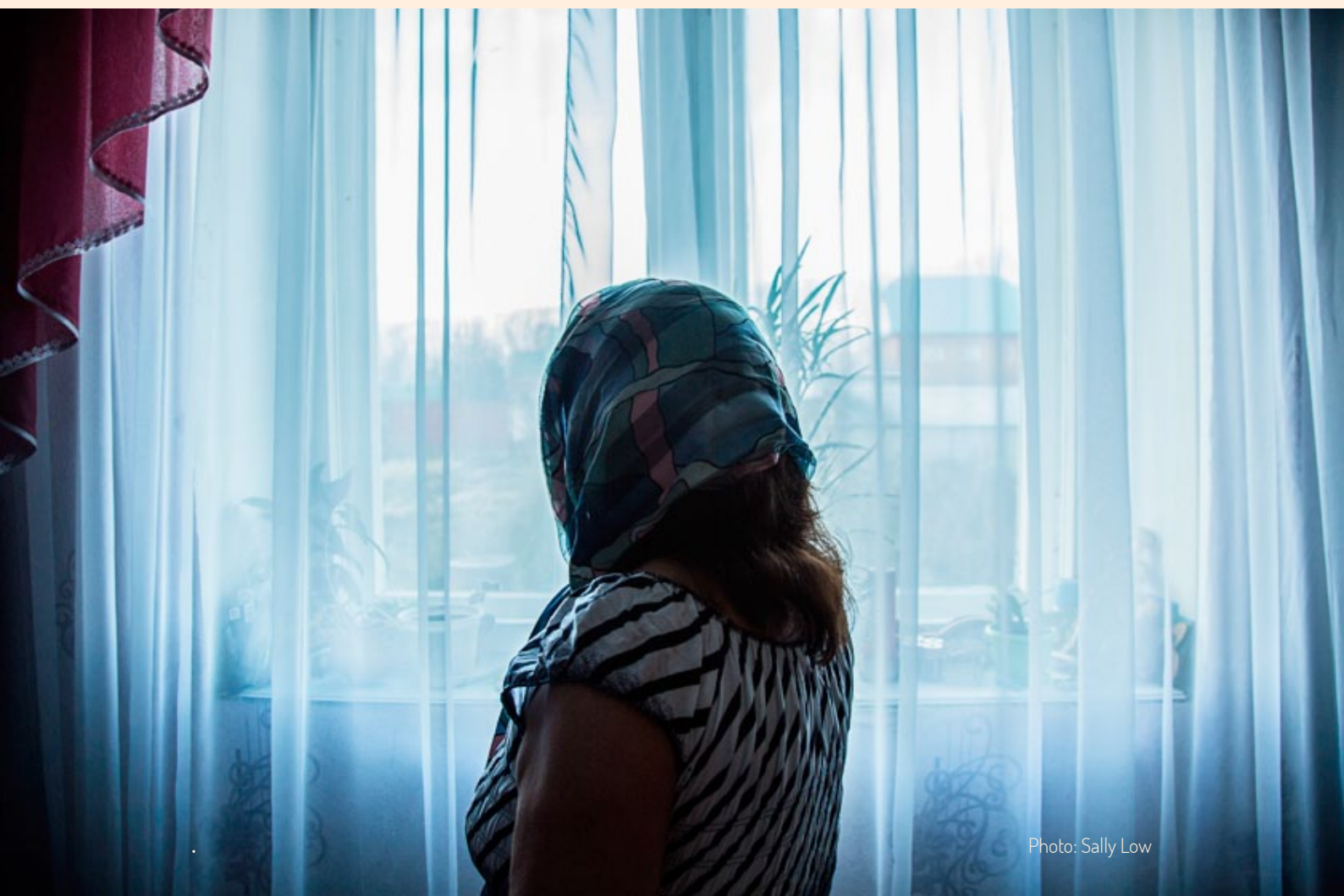
My family can't leave this house because there isn't anywhere else we can afford that would house us all, we are a big family. If the port company were to move us they would send us somewhere too small. We have no choice but to stay."

²⁵ To reach EU countries from Kuzbass, the coal is often transported about 4,100 kilometres to Russia's Baltic port of Ust-Luga, near St Petersburg – the largest hub for coal exports to Europe – before being shipped. The transportation costs are partially offset by cheap labour (miners are less well rewarded in Russia today than in Soviet times) and the economies of scale in open-pit mining, where there are high production rates and low production costs.

Recommendations

Fern and Coal Action Network call for:

- The human rights of all who live in the vicinity of coal mines to be respected by mining companies and the governments supporting them.
- An end to the destruction of forests for coal taking place in Kuzbass and around the world.
- A worldwide ban on new coal power stations and a commitment to phase out existing installations as soon as possible. This will improve our chances of keeping global temperature rises well below two degrees Celsius.



"There used to be a spirit in the forest, we were brought up knowing that we weren't allowed to raise our voices in the forest or we would upset its soul. I think the souls of nature have left because of the mining and all the explosions to get the coal. When I hear the blasting [from the mines] I feel like my soul is exploding."

Larissa, resident of Chuvashka, the last Shor village in the Myski district.



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