

**THE AMBER INDUSTRY:  
DEVELOPMENT  
CHALLENGES  
AND COMBATING AMBER  
TRAFFICKING  
IN THE BALTIC REGION**

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*This article considers the current state and prospective development of the amber industry in the Baltic Sea region. The authors identify the main obstacles to the industry's development in Russia — poor pricing mechanisms for raw amber, an imbalance between supply and demand, a slow pace of technological modernisation, and a delayed introduction of new technologies and processing techniques. The authors identify gaps in the regulatory framework and highlight problems of legal regulation and law enforcement as regards the amber industry. Combating illegal amber extraction and trafficking is a pressing problem in the Kaliningrad region (Russia) and other Baltic region states. The article explores theoretical aspects of the legislative policy on combating illegal amber extraction and trafficking. The authors focus on the relevant law enforcement practices and hold that administrative sanctions for unauthorised amber extraction and trade are not fully effective in Russia. The authors stress the need for introducing criminal liability for a repeated offence and outline opportunities for using forensic gemological examination of amber and amber products.*

**Key words:** amber industry, development strategy, amber trafficking, administrative responsibility, criminalist counteraction

### Introduction

The Kaliningrad region and certain areas of Lithuania, Poland, and Ukraine are home to the largest industrial deposits of amber. Over 98% of raw amber found in these areas is classified as Baltic amber, or succinite. The largest deposits are found on the coast of the Baltic Sea — in Russia (the Kaliningrad region), Lithuania, and Latvia. The Kaliningrad region is a unique area that holds 50-million-year-old amber deposits. In 2016, the Kaliningrad Amber Factory extracted 316.2 tonnes of amber, which was 0.7% above the 2015 level [1].

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Illegal operations account for 25—50% of the national raw amber extraction. A high proportion of illegal amber extraction and trafficking and an increase in the illegal trade in raw amber pose a major obstacle to the industry's development and make the amber industry lose its investment attractiveness.

Although the local village of Yantarny is home to 90% of the world's amber deposits, the Kaliningrad region holds only 5% of the amber jewellery market (fig. 1).

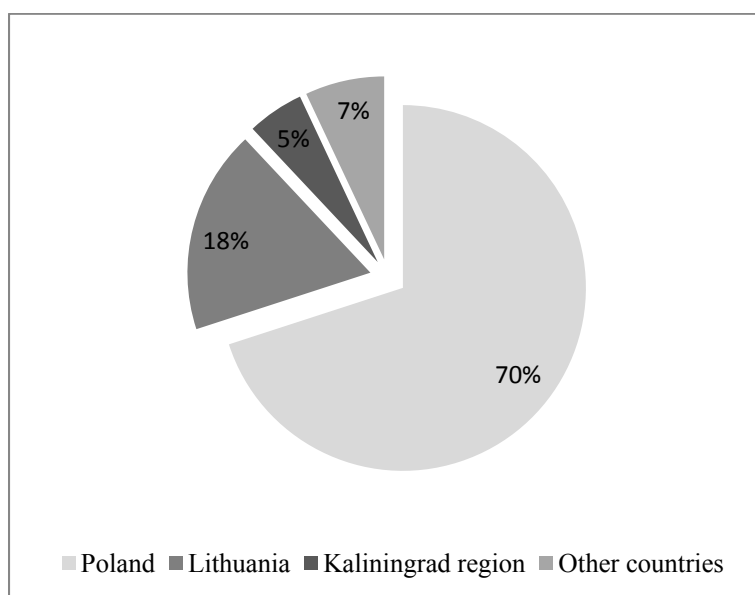


Fig.1. Global amber jewellery market

### Research problem

The major obstacles to the development of Russia's amber industry are inefficient pricing mechanisms for raw amber, a supply-demand imbalance, a slow pace of technological re-equipment, and delayed introduction of new technology and production techniques. Other problems include low competitiveness of Kaliningrad's amber product manufacturers in the international market, poor marketing, the insufficient exploitation of regional tourism potential, gaps in the regulatory framework, and a considerable proportion of illegal amber extraction and trafficking. This wide range of unresolved issues warrants the development of measures to boost the amber industry. Part of the measures is outlined in the Strategy for the Development of Russia's Amber Industry [2], which was commissioned by a presidential decree. At the same time, little attention has been paid to the role of law enforcement in countering illegal amber trafficking.

### Relevance of the study

The Strategy for the Development of Russia's Amber Industry is aimed to increase raw amber extraction to 500 tonnes a year, annual amber product manufacturing output to 5.6 billion roubles, and the number of people employed in the industry to 6,000 by 2025. Another goal set in the Strategy is to reduce raw amber exports to 15% [2]. Attaining these results requires a package of law enforcement measures aimed to counter illegal amber trafficking. There is an urgent need for such laws. Apparently, countering illegal amber trafficking is a pressing issue for the Kaliningrad region and Russia in general but also countries of the Baltic Sea region. Amber is a strategically important raw material [3]. Raw material markets have become a powerful geopolitical tool that will only gain significance in the future since mineral resources are not renewable.

Table 1

#### Amber deposits in Russia

Amber-rich region	Amber occurrence objects
Kaliningrad region	2 deposits, 8 plots
Nenets autonomous region	1 plot
Krasnoyarsk region	6 plots
Tomsk region	1 plot
Sakhalin region	8 plots
Kamchatka region	5 plots
Chukotka autonomous region	2 plots
<i>Total</i>	33 plots of land

### Statistics

In 2016, Russian police apprehended around two and a half thousand people for illegal amber extraction. Two hundred seventy motor pump units and 27 kg of amber were confiscated. Persons involved in illegal amber extraction paid 8,700,000 worth of fines. However, this sum is rather insignificant as compared to the incomes of illegal miners. An experienced miner can extract up to 300 USD worth of amber in several hours. Illegal amber extraction in the Kaliningrad region is estimated at 70—100 tonnes per year.

### Current state of research

The problem of illegal trade in raw materials in Russian regions has been addressed in several PhD theses — namely, those of O. S. Kuchin, V. N. Shutova, S. N. Maltov, and A. G. Ivanov [4—7]. However, most studies consider

countering illegal trafficking of precious metals and precious stones and very few analyse amber trafficking [8]. Apparently, the key aspects of juridical and law enforcement protection of the amber industry have been little studied.

### Legislation against amber trafficking

According to Article 7.5 of the Code on Administrative Offences of the Russian Federation, illegal extraction of amber is punishable with a 3,000—5,000 roubles fine and the seizure of the instrument of offence [11]. The object of offence is national mineral deposits of Russia and the subject of offence is amber. Elements of offence include the extraction and trafficking of amber — a stone that is not legally considered precious. However, a special procedure of classifying amber formations as precious stones is described in a governmental regulation [12]. The regulation sets out criteria for classifying unique formations as precious stones. Therefore, such formations fall under the federal law On Precious Metals and Precious Stones [13]. The sanctions listed in the law include criminal liability. In particular, criminal liability is imposed by Article 191 ‘Illegal Trafficking of Precious Metals, Natural Precious stones or Pearls’ of the Criminal Code of the Russian Federation and Article 192 ‘Violating the rules of handing over precious metals and precious stones to the state’.

Illegal miners are apprehended two-three times a week during preventive police raids.

On May 23, 2017, in a forest area at the River Neyma near the village of Cherepanovo, part of the town of Svetly, members of the Department of Economic Security and Countering Corruption, a division of the Kaliningrad Region Administration of the Ministry of Internal Affairs of the Russian Federation, and their colleagues from the Svetly Department of the Ministry of Internal Affairs carried out a preventive raid to counter the illegal extraction of raw amber. They apprehended 16 residents of the Zelenogradsk district, aged 18—47. One group was extracting amber using a DIY pump built in a GAZ 66 lorry and hidden under camouflage netting. The other group of offenders was driving three cars and using three motor pumps [14].

Of course, not all offenders are apprehended. Many of them promptly leave the scene. Most ‘diggers’ are well-equipped and mobile. They have an effective system of warning about the time and place of police raids. Moreover, some offenders dive for amber in the sea.

As an analysis of 2016—2017 court rulings on Article 7.5 of the Code of the Russian Federation shows, the most common sanction is a 4,000 fine and the seizure of spades, shovels, motor pumps, hoses, sweep nets, pipes, and other tools necessary for illegal amber extraction [15].

These sanctions do not prevent those apprehended from committing a similar offence. Most diggers are unemployed residents of the village of Yantarny. They do not have a stable income and many of them do not pay

finer. This results in an offence of administrative fine evasion [16]. According to Part 1 of Article 20.25 of the Code of the Russian Federation on Administrative Offences, the magistrate imposes a penalty of 20—30 hours of compulsory community service for such an offence [17].

We argue that the proposed increase in the fines to 50,000 roubles will not contribute to the prevention of illegal amber trafficking. An effective economic measure to improve the situation in the amber industry may be licensing individual entrepreneurs to exploit amber deposits. This would increase the employment and tax collection rates. As of January 1, 2017, only seven licenses to exploit amber deposits were issued in Russia.

The situation in Poland is very similar. A 500 zloty fine does not stop diggers from committing offences — in one night, a digger can extract up to 10,000 zloties worth of amber. Border guards, the Forest Service, the Police, and the City Guard patrol the area stretching from Krynica Morska to Ustka several times a week to apprehend persons suspected of illegal extraction of amber.

Let us consider a typical example of the inefficiency of administrative sanctions.

On May 2017, the police apprehended three groups of diggers in the coastal area of the Baltic Sea. The diggers were brought to administrative liability for unauthorised extraction of amber. Sixteen men were using shovels to dig out amber. The works posed a significant risk to life — they were carried out at the bottom of deep illegally dug pits. Two of the apprehended had failed to pay on time three fines of 11,000 roubles. The fines had been imposed for similar offences [18].

Obviously, to counter illegal activities, a repeated offence of unauthorised amber extraction committed by a group of offenders should entail criminal liability.

Illegal amber extraction is associated with a negative impact on the environment. The fertile layers of agricultural soils are being eroded. The forest area between the villages of Nadezhdino and Volnoye in the Zelenogradsk region has turned into a crater-studded landscape. Three hectares of soils have been destroyed and recultivating the territory requires substantial funds.

The national non-profit organisation Zeleny Patrul (Green Patrol) estimates the environmental damage to the region's agricultural lands from illegal amber excavation at 250—400 million roubles. Unauthorized removal or replacement of the fertile soil layer is punishable by a fine of 1,000—3,000 roubles under Article 8.6 'Land damage' of the Code of the Russian Federation on Administrative Offences. This article is rarely invoked, since it is difficult to establish the guilt of the owner or occupier of a parcel of land, who usually do not participate in illegal amber extraction.

On July 18, 2016, a state inspector of the Kaliningrad Regional Administration of the Federal Service for Veterinary and Phytosanitary Surveillance together with the owner of a parcel of land inspected the object and established that there were pits of a total area of 1906 square meters. Citizen T. explained that she had purchased the parcel of land in such a condition. Her words are corroborated by photographs from the district monitoring. The perpetrators have not been identified [19].

Illegal extraction is concentrated primarily within national nature reserves of regional significance [20]. Such actions are punishable under Article 8.39 ‘Violating the Rules for Protecting, and Use of Natural Resources in Areas under Special Protection’ of the Code of the Russian Federation on Administrative Offences. However, the sanction does not have a preventive effect on offenders, since the fine for citizens does not exceed 3,000—4,000 roubles.

Unfortunately, the market is awash with counterfeit products. Some artificial resins accurately imitate the colour and texture of natural amber. When buying amber jewellery, a customer can be easily cheated. In such situations, Part 2 of Article 14.7 of the Code of the Russian Federation on Administrative Offences ‘Deception of consumers’ can be invoked much more often. Under the article, deception of consumers is punishable with a fine of 3,000—5,000 roubles.

It is rather easy to detect counterfeit amber. Plastic is brighter in colour and the colouring is more even. The natural stone looks richer, it has a unique pattern of chaotic colour gradients. Amber and amber products are slightly lighter than plastic and glass counterfeits. Amber will surface in salty water and counterfeits will not. When rubbed vigorously against a cloth or a palm, amber will give off a slight scent of resin, reminiscent of the pine, and any counterfeit will have a sharp unpleasant smell. Amber is resistant to alcohol and solvent, whereas plastic will disintegrate when exposed to acetone or polish remover. These liquids will damage plastic counterfeits, change their colour, and roughen the contact area. If a counterfeit banknote detector is available, amber can be checked for luminescence. However, it is always better to contact a specialist who can tell a fake in mere seconds.

Table 2

### Properties of amber

Property	Description
Colour	translucent, yellow, brown, red or black, rarely green and blue
Hardness	1—3 on the Mohs scale
Fracture	Conchoidal
Relative density	1.05—1.10 (amber surfaces in a strong saline solution)
Refraction index	1.54
Transparency	from transparent to opaque, depending on the size, number, and distribution of gas bubbles
Luminescence	in most cases, weak bluish-white fluorescence when exposed to long- and shortwave ultraviolet radiation
Thermal properties	amber is thermoplastic (becomes soft at temperatures of 150—200° C)
Electric properties	amber is a dielectric (it produces electricity when rubbed)
Inclusions	bubbles (sometimes double bubbles), spiral-like impressions, plant residues, insects, small animals (very rarely), particles of quartz sand and other minerals (beautiful rare inclusion make amber more expensive)



There is a need for joint action between police investigators and experts [21]. An important investigative tool is gemmological examination — a study of different minerals, including amber. Experts reveal the origin of unprocessed stones, establish their authenticity, detect counterfeits, evaluate stones, and identify the conditions in which stones were processed, etc.

Unfortunately, in many states, examinations are associated with a number of complications. Thus, regional expert institutions do not always conduct such studies [22].

Article 7 of the Law of the Russian Federation No. 2300-1 of February 7, 1992, (as amended on July 3, 2016) On the Protection of Consumer Rights enshrines the right of a consumer to full and accurate information about the manufacturer (contractor, sellers) and about the good. The protection of consumer rights can be ensured by consumer unions and associations. However, this does not take place in the amber industry.

As regards illegal trafficking of amber, the most effective paragraph of the Code of the Russian Federation on Administrative Offences is Part 2 of Article 16.1 ‘Illegal Transportation Across the Customs Border of the Customs Union of the Goods and (or) Vehicles of the International Transportation. It imposes a fine ranging from half to three times the cost of the goods with the seizures of the said goods or without it.

In illegal export of amber and amber products, stashes are usually used.

On August 18, 2016, during a customs examination of a tourist bus traveling from Russia to Poland, customs officers of the Bagrationovsk border checkpoint found 33 kilogrammes of raw amber stones of different sizes, which had not been mentioned in the customs declaration and were being shipped out of the country secretly [23].

In 2016, customs officers seized 50 million rouble worth of smuggled amber.

Below is another typical example of illegal transportation of amber across the customs border.

On March 23, 2016, at the Nizhneleninskoe border checkpoint of the Amurzet customs station of the Birobidzhan customs, a citizen of the Russian Federation attempted to smuggle amber and amber products to China. In the course of a pat-down search, 27 bags, each weighing 1.5 kg, were found under the woman’s clothes. She explained that an unknown Chinese national had given those the bags in Khabarovsk and asked to transport them to China [24].

Probably, the regulation that is most often invoked in law enforcement in countering illegal trafficking of amber is Part 1 of Article 20.17 of the Code of the Russian Federation on Administrative Offences ‘Violating Pass Procedures at an Object under Guard’. It imposes a fine ranging from 3,000 to 5,000 roubles with the seizure of the instrument of the offence. Since 2013, more than 2,000 people have been apprehended at secured facilities.



On May 27, 2017, at 9.35 pm, an unemployed citizen R. trespassed on the premises of the Kaliningrad amber factory attempting to illegally extract amber. The perpetrator was apprehended by security guards. He explained that he had been walking in the forest and reached a stream by accident. He had not seen either the prohibition signs, or the fence.

It is a historical fact that in the late 1930s, the security guards of the Königsberg Amber Factory were allowed to open fire with no warning if they spotted someone within a hundred meters from amber extraction sites [25]. We believe that the effective countering of illegal transportation of amber across borders requires close international collaboration in combating transboundary crime [26].

Establishing international investigation and other groups for combating transnational crimes and offences seems to be an interesting and promising solution. Lithuanian forensic scientists have put forward a promising idea of creating a common European forensic space [27].

## Conclusions

Administrative regulations on illegal amber trafficking are not fully exploited today. They do not provide efficient tools for countering illegal amber extraction and trafficking. Neither are they effective in removing fake amber products from the amber market. Obviously, administrative sanctions are not an adequate punishment. There is a need for imposing criminal sanctions on offenders. Undoubtedly, bringing offenders to criminal liability for stealing, smuggling and illegal trade in amber will contribute to attaining the goals outlined in the Strategy for the Development of Russia's Amber Industry until 2025 approved by an order of the Government of the Russian Federation No. 1966-r of September 15, 2017.

International collaboration in combating transboundary crime is an effective measure to counter illegal international trafficking of amber [26]. Establishing international investigation groups for combating transnational crimes and offences as well as creating a common European forensic space as it was proposed by Lithuanian forensic scientists seem to have legal potential for changing the situation in the amber industry [27; 28].

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