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FROM BANNING TO RECYCLING

Ban on flexible polymer packaging in Russia is impractical, experts say.

Global experience

Many countries and regions are now imposing restrictive measures on the use of flexible polymer packaging that, in certain cases, may go as far as a complete ban. The authors of the study on Flexible Polymeric Packaging believe that such measures do not bring any meaningful environmental benefits, as evidenced by international case studies.

THE ENVIRONMENTAL IMPACT OF PAPER BAGS IS BIGGER THAN THAT OF PLASTIC PACKAGING.

For example, California has seen a sharp increase in sales of 15 and 30 litre plastic garbage bags that are now replacing plastic bags fr om stores. The ban has led to greater reliance on reusable and paper bags. Evidence presented in the study demonstrates that the environmental impact of paper bags is bigger than that of plastic packaging. The ambiguous outcomes of the restrictions have led local authorities to consider alternative solutions. In Chicago, for example, the ban was replaced by a tax on all types of disposable packaging (including plastic and paper bags), thus reducing the frequency of its use by 27.7%.

In Chicago, the ban on single-use plastic bags was replaced by a tax.

ALL PLASTIC PACKAGING WITHIN THE EU SHOULD BECOME REUSABLE BY 2030.

Plastic waste is increasingly being recycled worldwide. Thus, the European Union requires that all plastic packaging should become reusable by 2030. In addition, there are bodies and associations that promote recycling. The European Commission led a pledging campaign to triple the uptake of recycled plastics by industries.

PlasticsEurope, a pan-European association of plastics manufacturers, made a voluntary commitment to reach 60% of reused and recycled plastic packaging by 2030. There is also the CEFLEX initiative aimed at establishing a collection, sorting and reprocessing infrastructure for post-consumer flexible packaging across Europe.

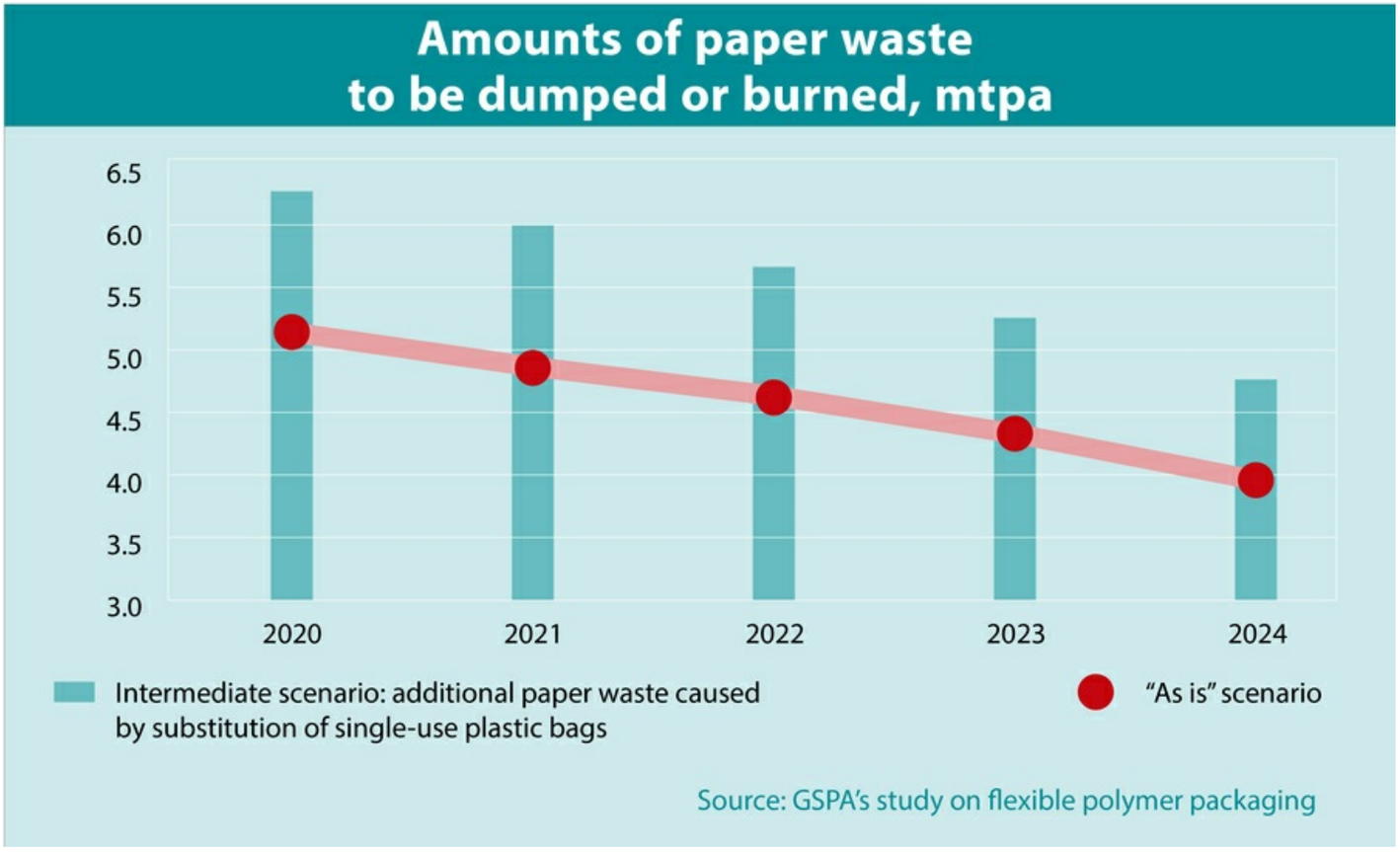
As an example of efficient recycling practices, the researchers refer to the German regulation in effect since 2019, which obliges all manufacturers to register with the Central Packaging Registry in order to trace all polymer packaging materials.

SINCE 2019, ALL GERMAN MANUFACTURERS MUST PARTICIPATE IN THE CENTRAL PACKAGING REGISTRY SO THAT ALL POLYMER PACKAGING MATERIALS CAN BE TRACED.

Three policy scenarios

The study assessed the implications of the following policy options: prohibitive (banning the use of consumer flexible packaging), intermediate (banning the use of plastic bags to transport purchases) and recycling-centred (encouraging the recycling of flexible plastic packaging).

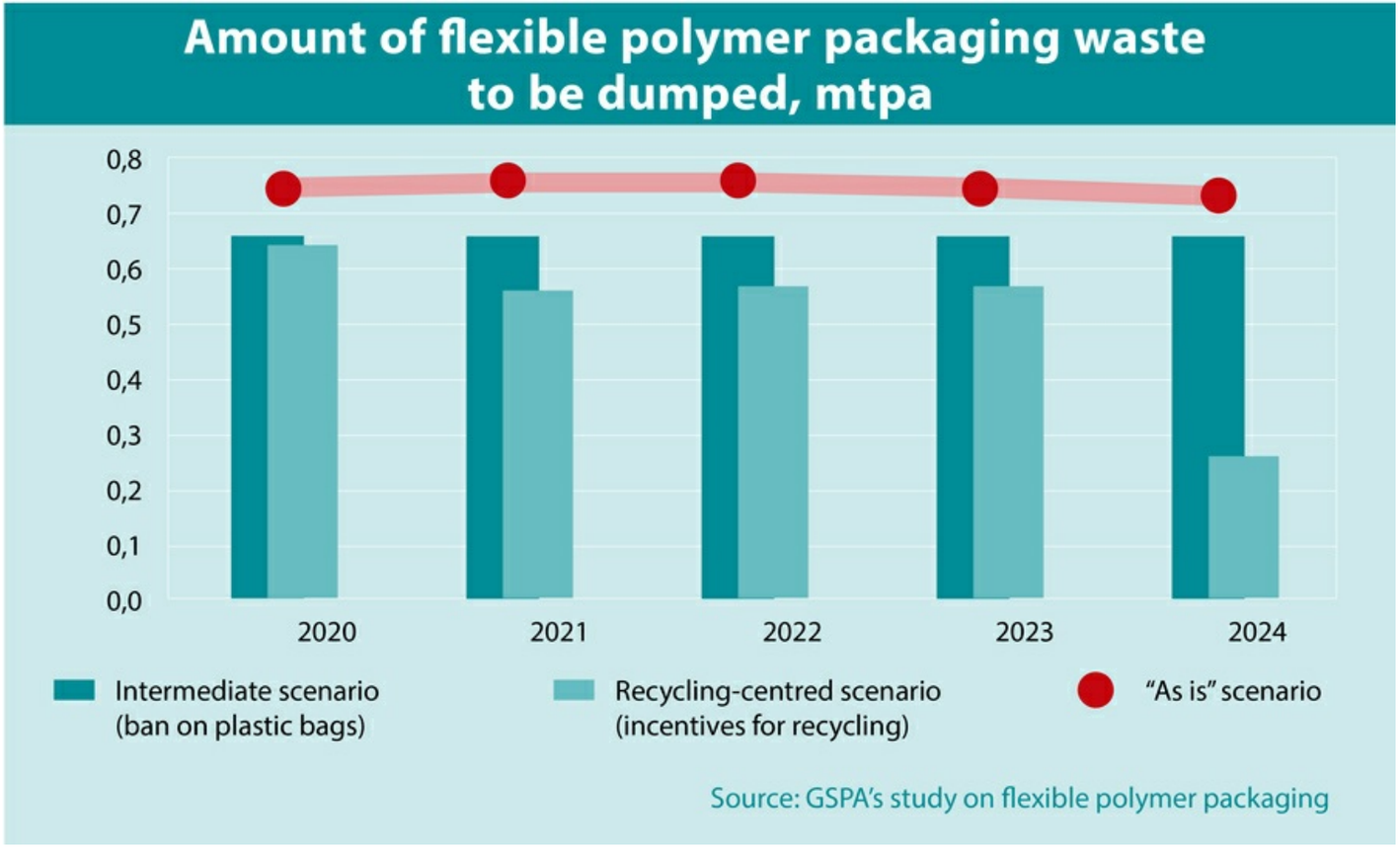
According to the experts, the intermediate option of banning plastic bags from the checkout area would not bring any clear benefits as the volume of paper waste in this case will increase by 1.15 mt the very next year after the ban is introduced. As such, restricting plastic bags would generate additional quantities of non-recycled paper waste, which is estimated to vary between 1.15 mt in 2020 and 820 kt in 2024. The current level of paper waste collection would not be sufficient to produce the required quantity of recycled paper bags, which means that additional raw pulp would be needed.



IF PLASTIC BAGS ARE BANNED FROM THE CHECKOUT AREA, THE VOLUME OF PAPER WASTE MAY INCREASE BY 1.15 MT THE VERY NEXT YEAR.

The ban would multiply the total amount of other types of packaging waste, including disposable paper packaging, which would be one of the main substitutes for plastics. Meanwhile, a full product life cycle analysis shows that paper bags have a greater environmental impact than plastic ones. This is due to combined environmental costs such as felling volumes and CO2 emissions throughout the production and transportation value chain. Moreover, the polymer packaging ban would facilitate an increase in food waste by 3–17% of its current level of 17 mtpa. And if the amount of food waste increases by 10%, methane emissions will rise by 170 ktpa.

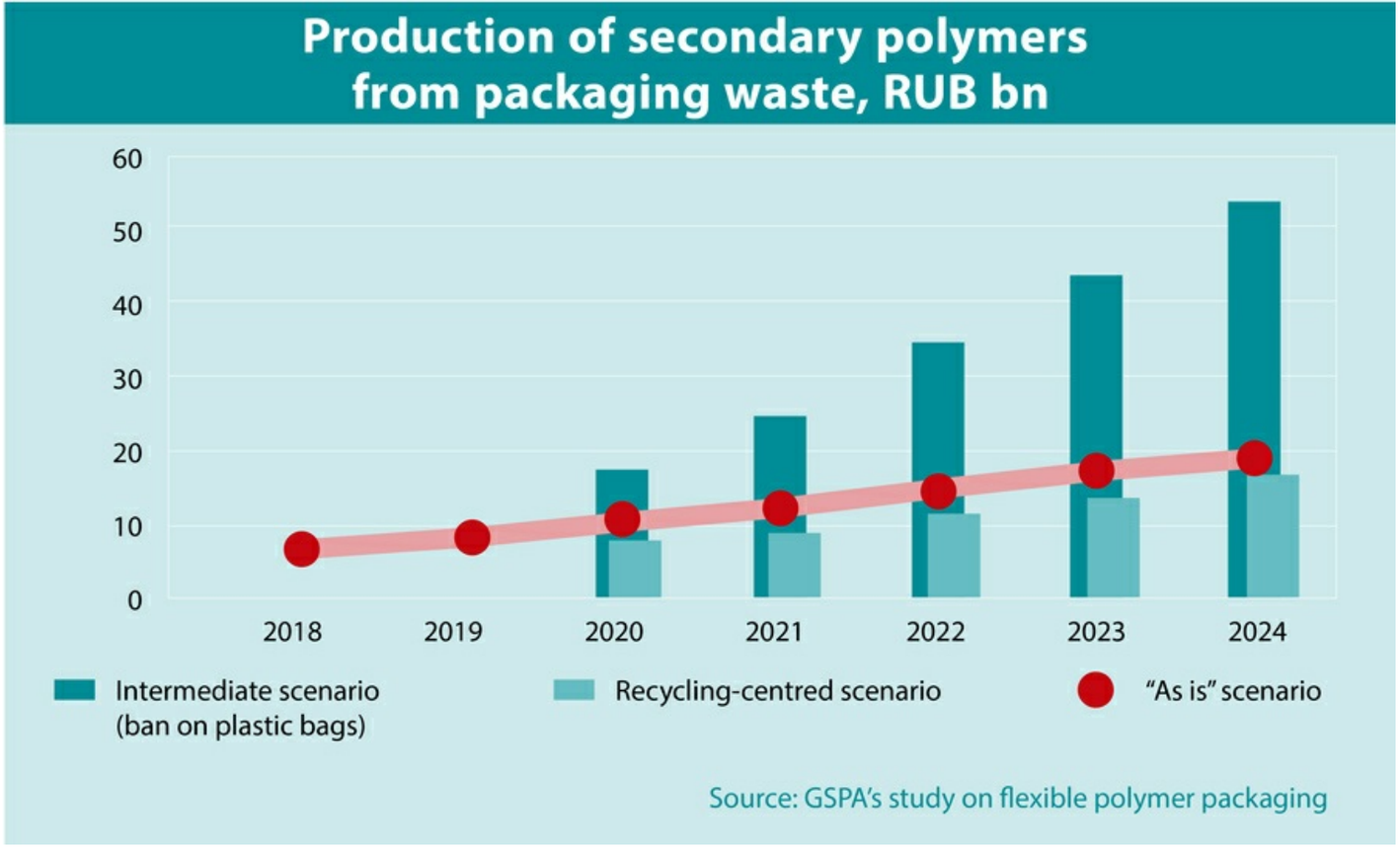
The authors are confident that a complete ban on flexible polymer packaging in the food and retail industries will have adverse economic and social consequences. This scenario would lead to increased packaging line refurbishment and logistic expenses, since alternative packaging has greater weight and size and shortens the shelf life of food products. The logistic and operating costs are expected to grow by 10%, which would translate into a 9.5% hike in staple food prices.



RESTRICTING PLASTIC BAGS WOULD GENERATE ADDITIONAL QUANTITIES OF NON-RECYCLED PAPER WASTE VARYING BETWEEN 1.15 MT IN 2020 AND 820 KT IN 2024.

"When assessing the environmental impact of the ban on plastic bags and their substitution with paper alternatives, it should be kept in mind that decomposition of one kilogramme of paper waste in the anaerobic conditions of a landfill produces about 600 g of methane. Waste compaction at landfills makes this issue extremely acute," the experts noted. Even assuming that of the "additional" 1.15 mtpa of paper waste generated by the ban, only half is to be decomposed in anaerobic conditions, this will produce about 445 kt of methane, equivalent to 38 mtpa of CO2 over a 20-year horizon.

The recycling-centred scenario implies a gradual raise of the regulatory flexible packaging recovery rate to 100%, introduction of requirements for the content of recyclable polymers in packaging, and VAT exemption for polymer waste handling activities. Its implementation in Russia would result in a 66% reduction of the annual quantity of dumped flexible packaging waste by 2024, with a five-fold increase in recyclable polymer production. This scenario would make it possible to achieve the target output of rubber and plastic goods by 2024 (RUB 1.459 trillion per year), with no additional investment required in alternative packaging and equipment and no growth in consumer prices for food products.



Market players' feedback

The findings of the study were presented at an Interfax round table attended by the authors and the industry representatives. Having reviewed the results of the study, market participants agreed with the experts' findings.

THE CHOICE BETWEEN A POLYETHYLENE BAG, A PAPER BAG OR A NONDISPOSABLE BAG SHOULD BE UP TO THE SHOPPER, BUT THERE IS A NEED TO WORK ON THE DESIGN OF PLASTIC PACKAGING SO THAT IT CAN BE EASILY IDENTIFIED AT THE SORTING FACILITY AND FORWARDED TO A RECYCLER.

According to Ruslan Gubaidullin, Executive Director of the Clean Country Association, the environmental situation in Russia will not improve if plastics are banned altogether. "Our responsibility is to keep the system running, so that each bottle gets into the bin, then the bin content gets into the waste container and goes to the recycling plant," he said. He also noted that Russia has enough capacity to reprocess plastic waste, but a new economy has not yet been fully built. Besides, it is important to raise public awareness about the value of plastic recycling.

According to Irina Bakhtina, Vice President for Sustainable Business Development and Corporate Affairs at Unilever, the problem of environmental pollution can be solved by developing circular economy. "It is imperative that all collected waste not be sent to an incinerator, but to a processing facility wh ere packaging can be properly reprocessed or, as we say, 'functionally recycled' and delivered back to the economy, not to a landfill or a furnace," she emphasised.

According to Maxim Remchukov, Sustainable Development Director at SIBUR, the choice between a polyethylene bag, a paper bag or a non-disposable bag should be up to the shopper, but there is a need to work on the design of plastic packaging so that it can be easily identified at the sorting facility in order to be forwarded to a recycler. "Changing the packaging design may result in larger supplies of materials that are suitable for mechanical processing. Inside the industry, we see huge investments in R&D and believe that the future lies in chemical recycling, which will significantly increase the amount of plastic waste drawn back into the economy," Maxim Remchukov summarised.

Banning plastic bags from the checkout area would not bring any clear benefits.