

# Mercury and Other Toxic Chemicals and Waste

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A Cartoon Summary

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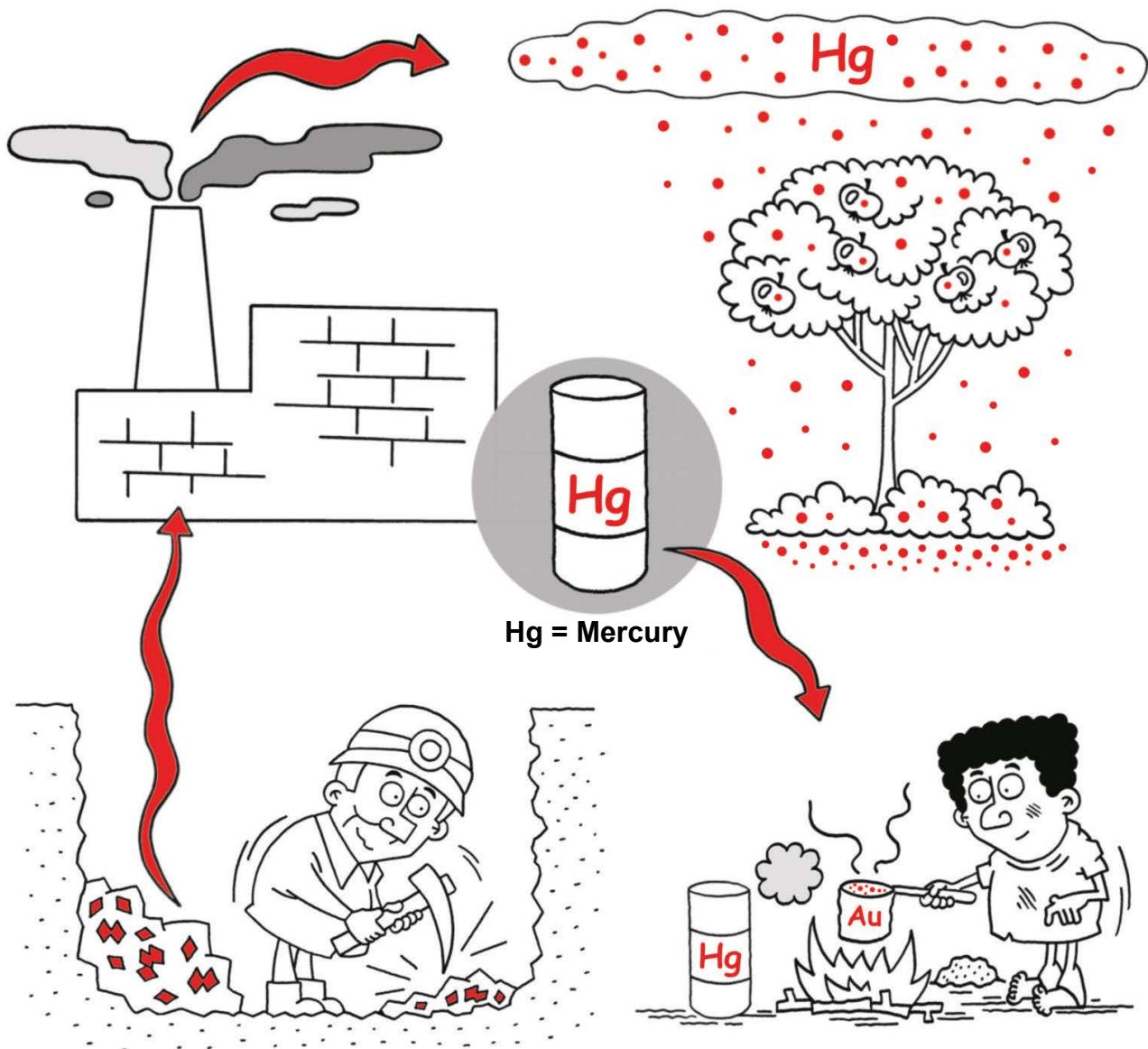
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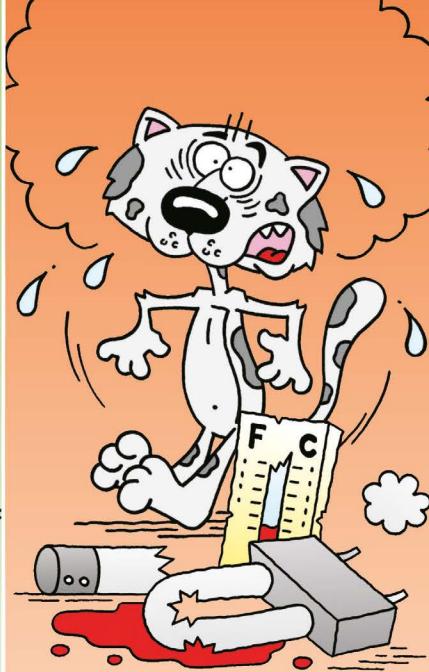


## Different forms of mercury



**HgS**

Mineral: cinnabar



**Hg**

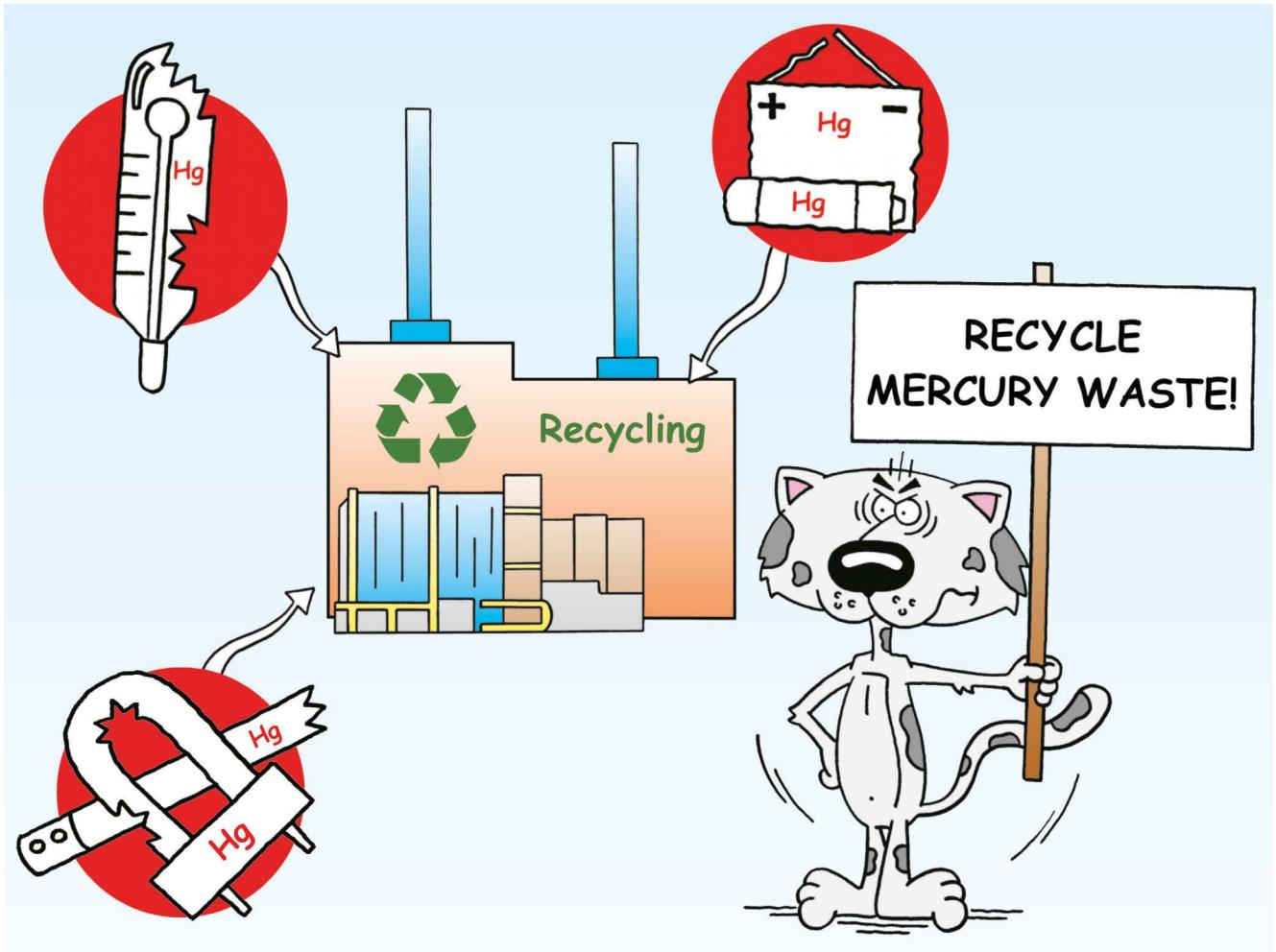
Mercury vapour



**CH<sub>3</sub>HgC**

Methyl mercury

Mercury's toxic effects depend on its form in the environment. The least toxic is the sulphuric (mineral) mercury found in cinnabar. Elemental (metallic) mercury is more toxic, especially in its gaseous form. The soluble forms of mercury, and especially methylmercury, adversely affect water ecosystems, and consequently affect human health through the consumption of contaminated food.



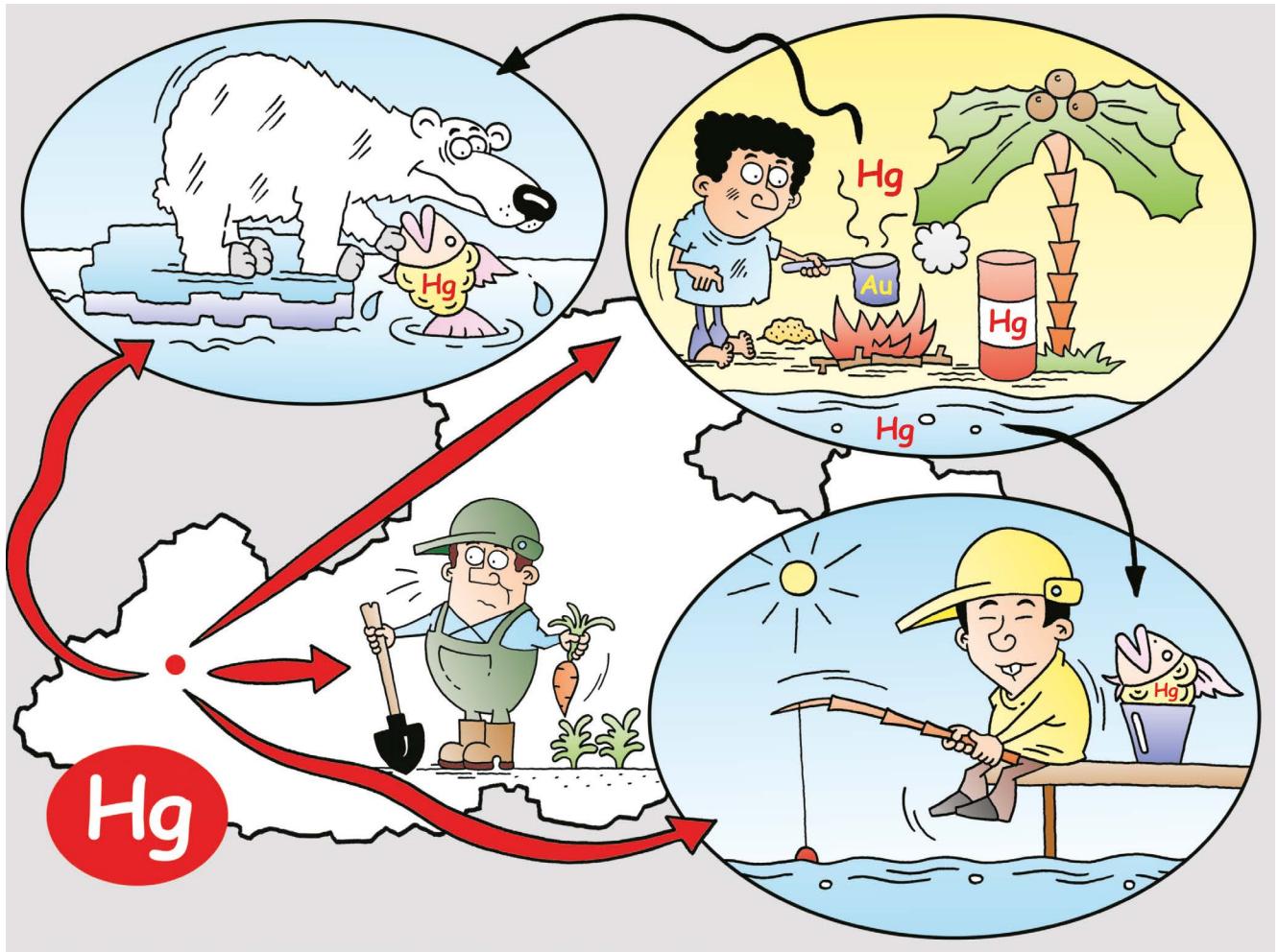
Mercury-containing waste that originates in households requires responsible handling and recycling. Secondary or recycled mercury produced from wastes has a smaller environmental footprint than primary mercury.



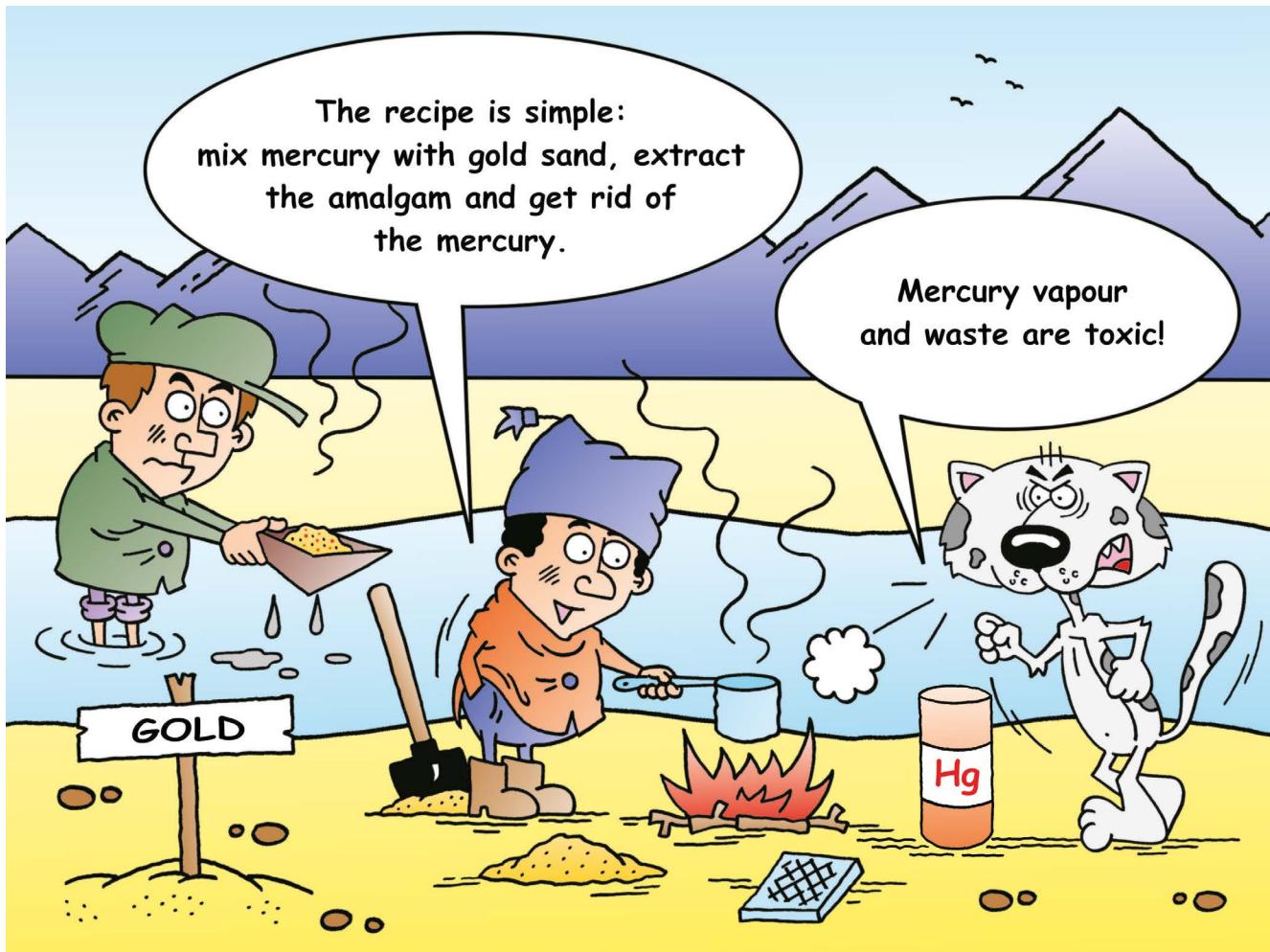
Can I interest you in a mercury lamp or thermometer?

No, thanks!  
We prefer mercury-free products!

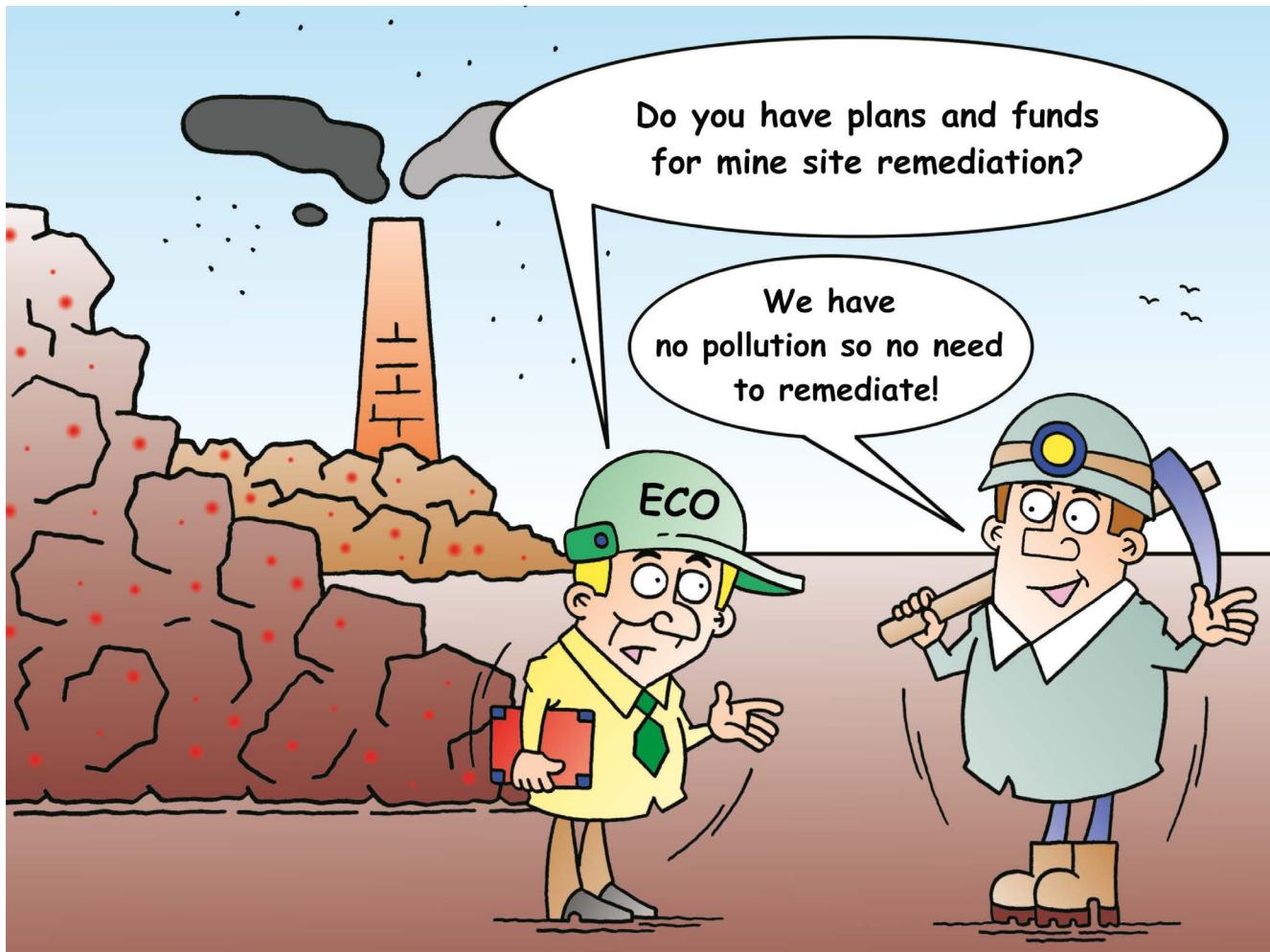
While some mercury-containing lamps and thermometers are still widely available, their use is shrinking due to the availability of environmentally sound alternatives.



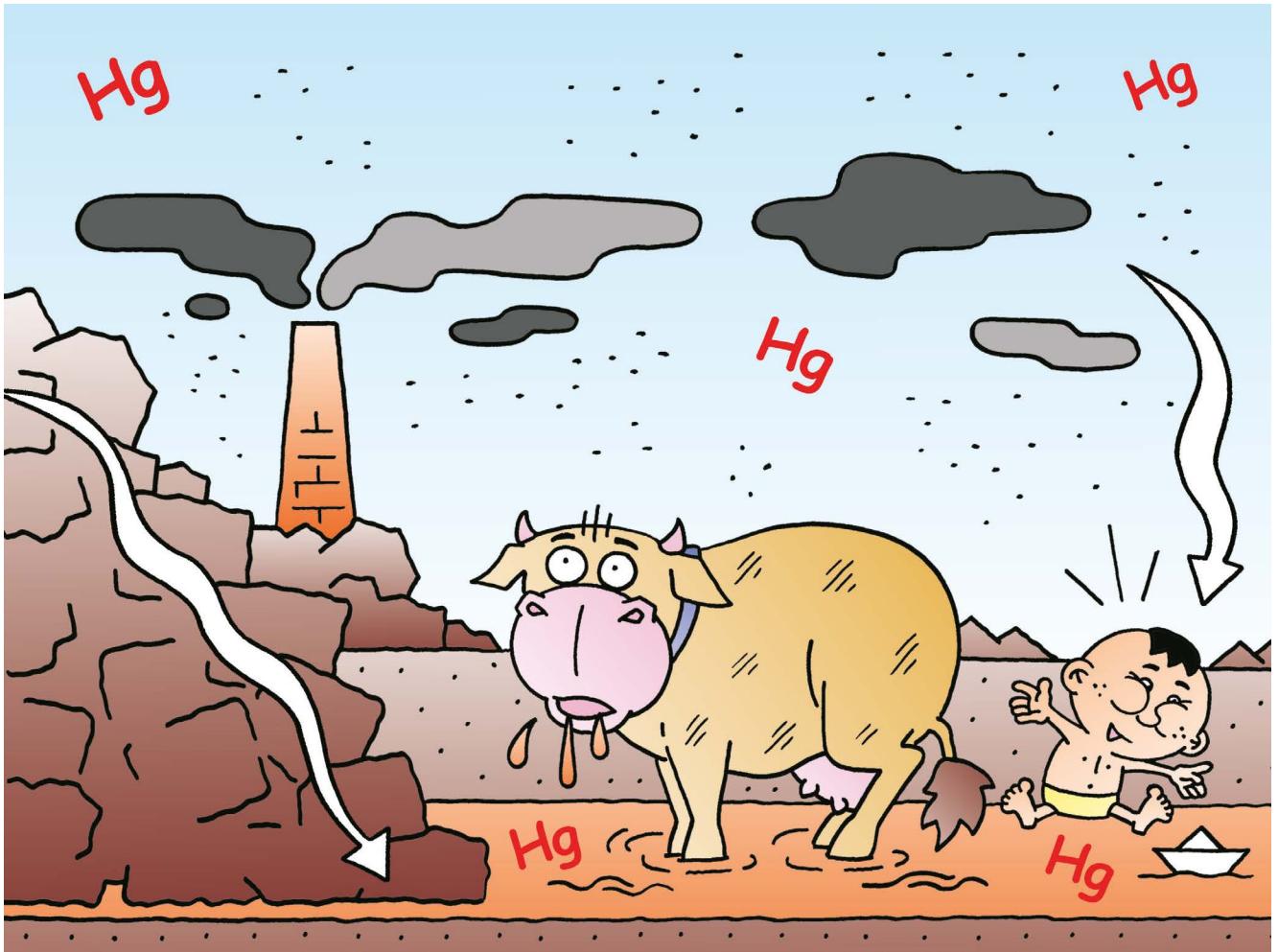
Primary mercury mining is raising several environmental concerns: mercury smelter emissions and waste contaminate local air and soils; some of the emissions enter the global atmospheric circulation and travel long distances; and while most of the mercury is exported, some is used by artisanal small scale gold miners and ultimately affects water ecosystems and public health.



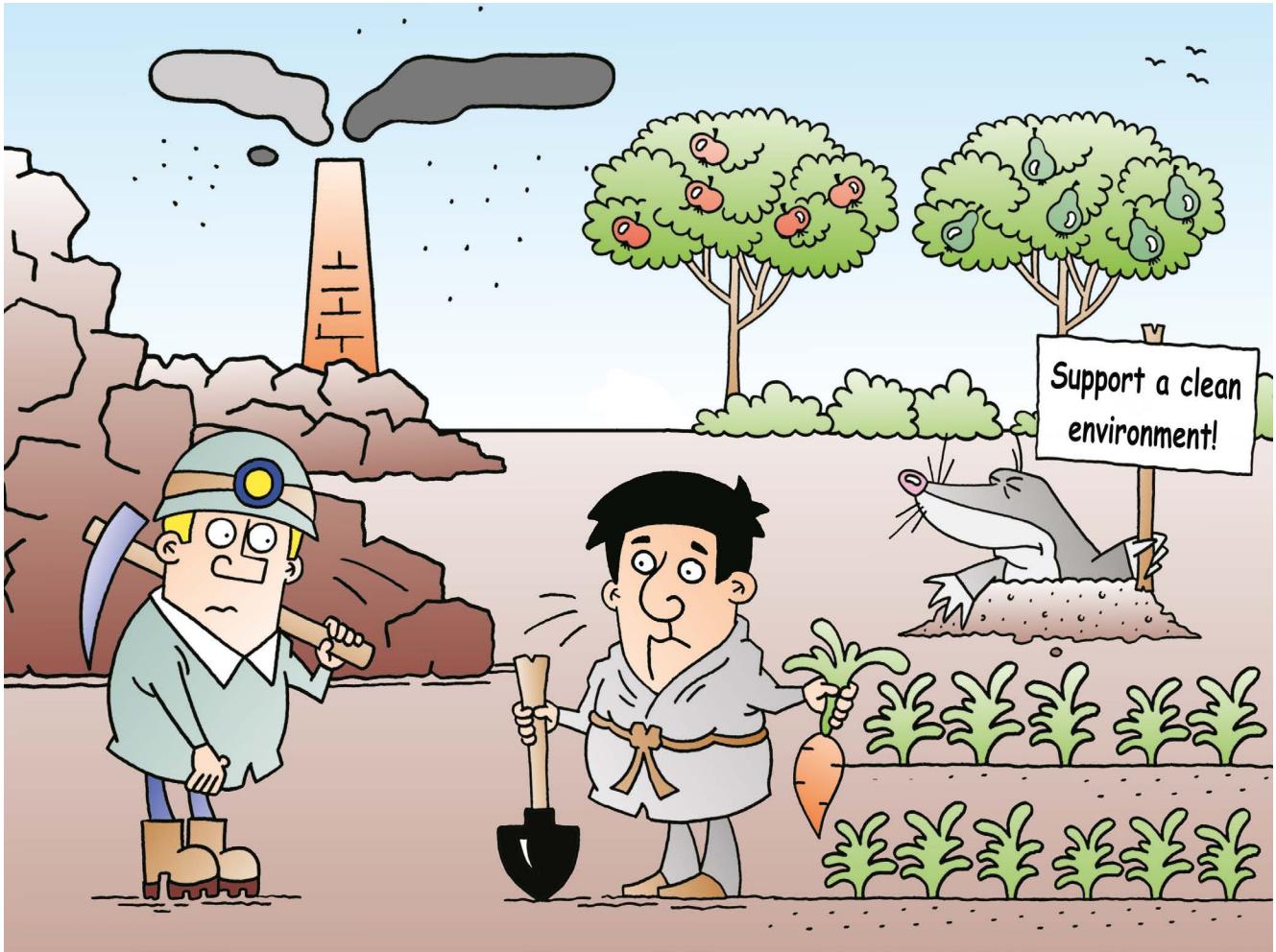
Mercury is still used by thousands of artisanal small scale gold miners around the world. As a result, mercury enters river ecosystems and the atmosphere, and threatens the environment and workers' health.



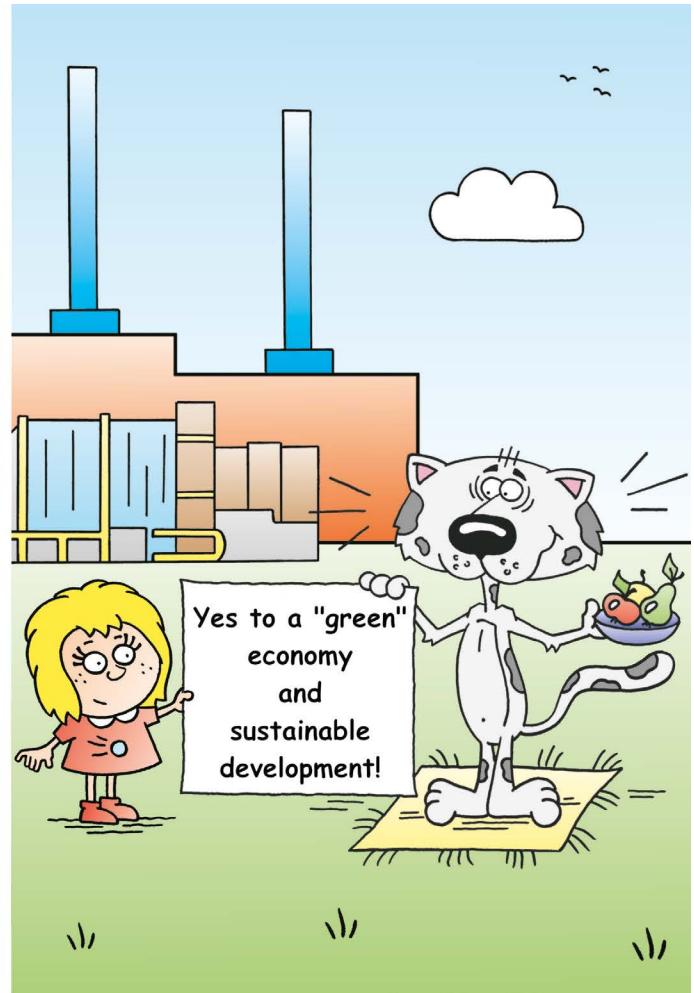
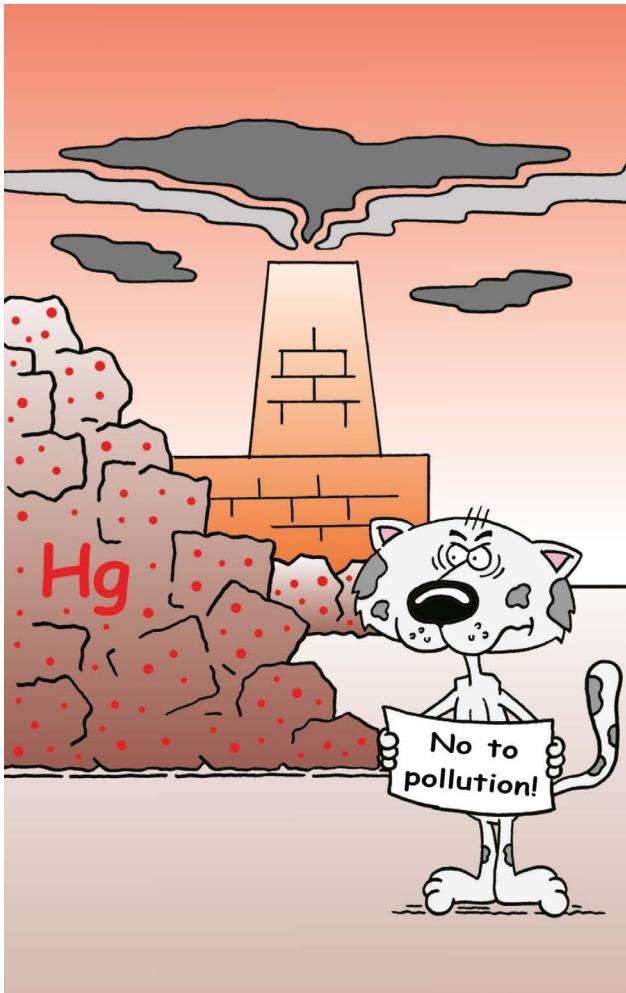
Polluting industries often have no plans or funds for ongoing or future clean-up. As a result, when a company stops production or when its profile or owner changes, all pollution is a legacy "gift" to the local authorities and populations, who have limited resources and capacities to respond to the task.



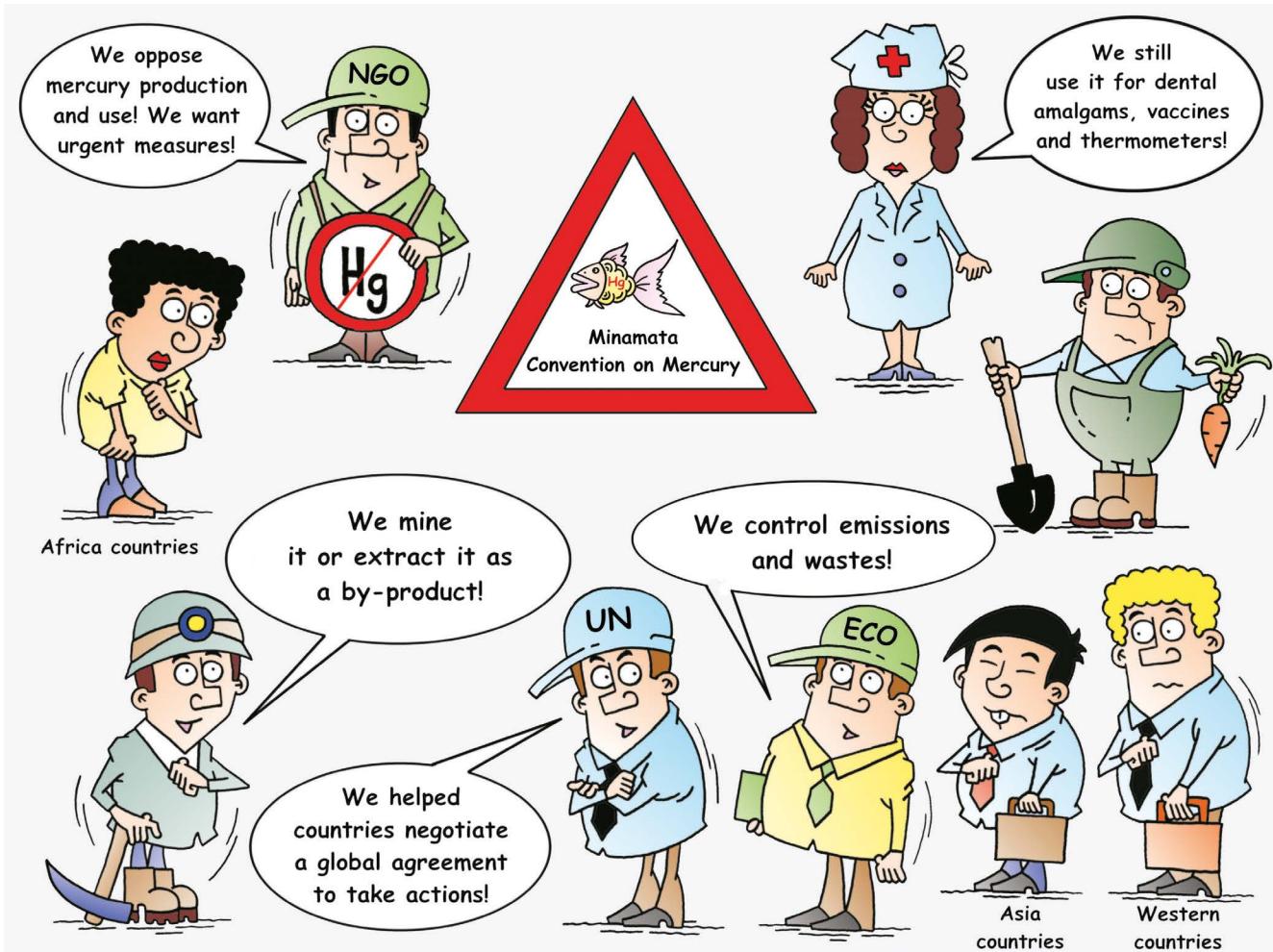
Often, animals graze and kids play close to industrial waste sites.



Farmers who coexist with polluting industrial sites are interested in minimizing the environmental risks to their soils and agricultural crops so that their produce is clean and competitive.

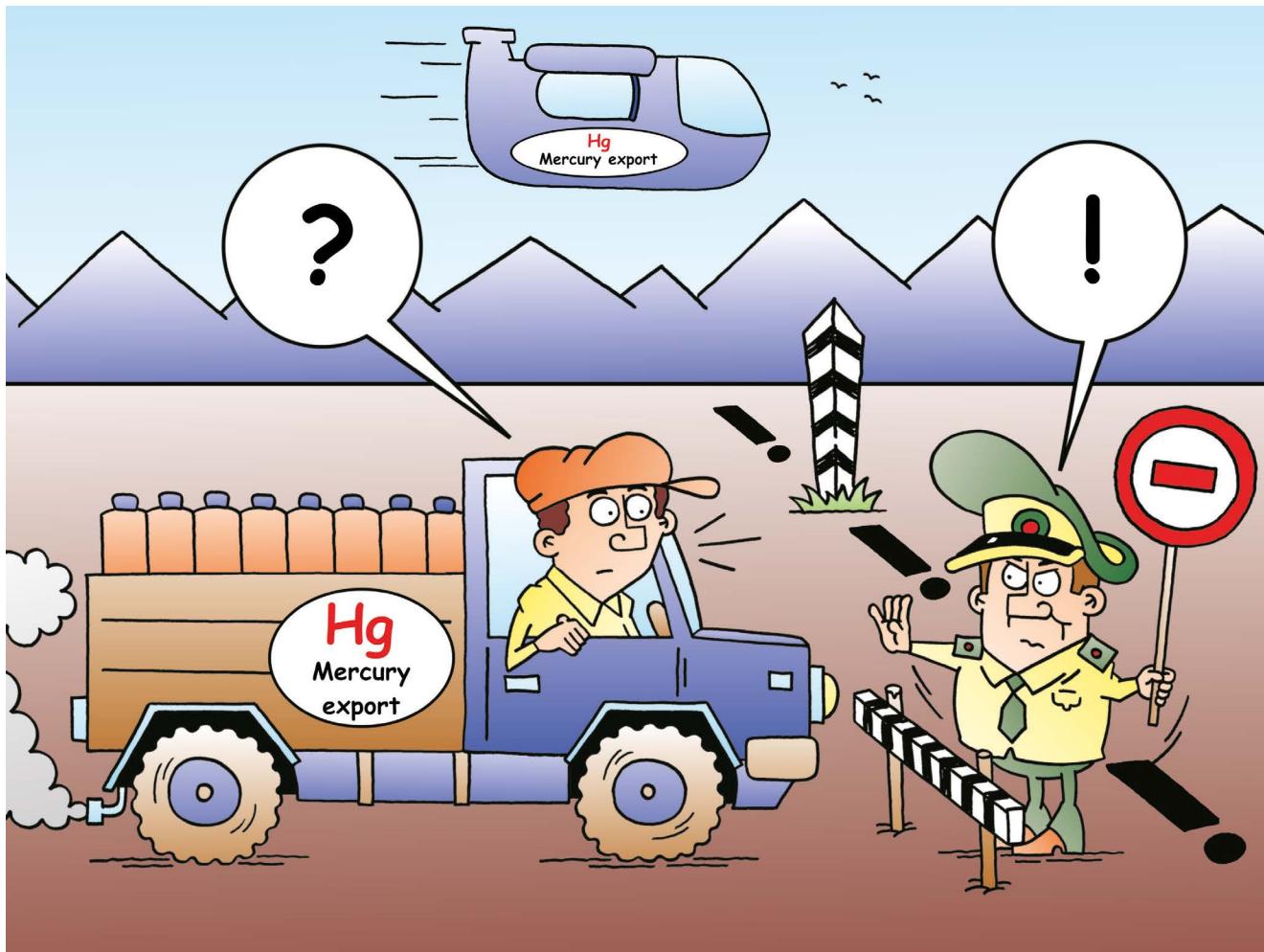


The transition of local and national economies to environmentally responsible and efficient production creates new jobs, contributes to sustainable development and improves the environment both locally and globally.

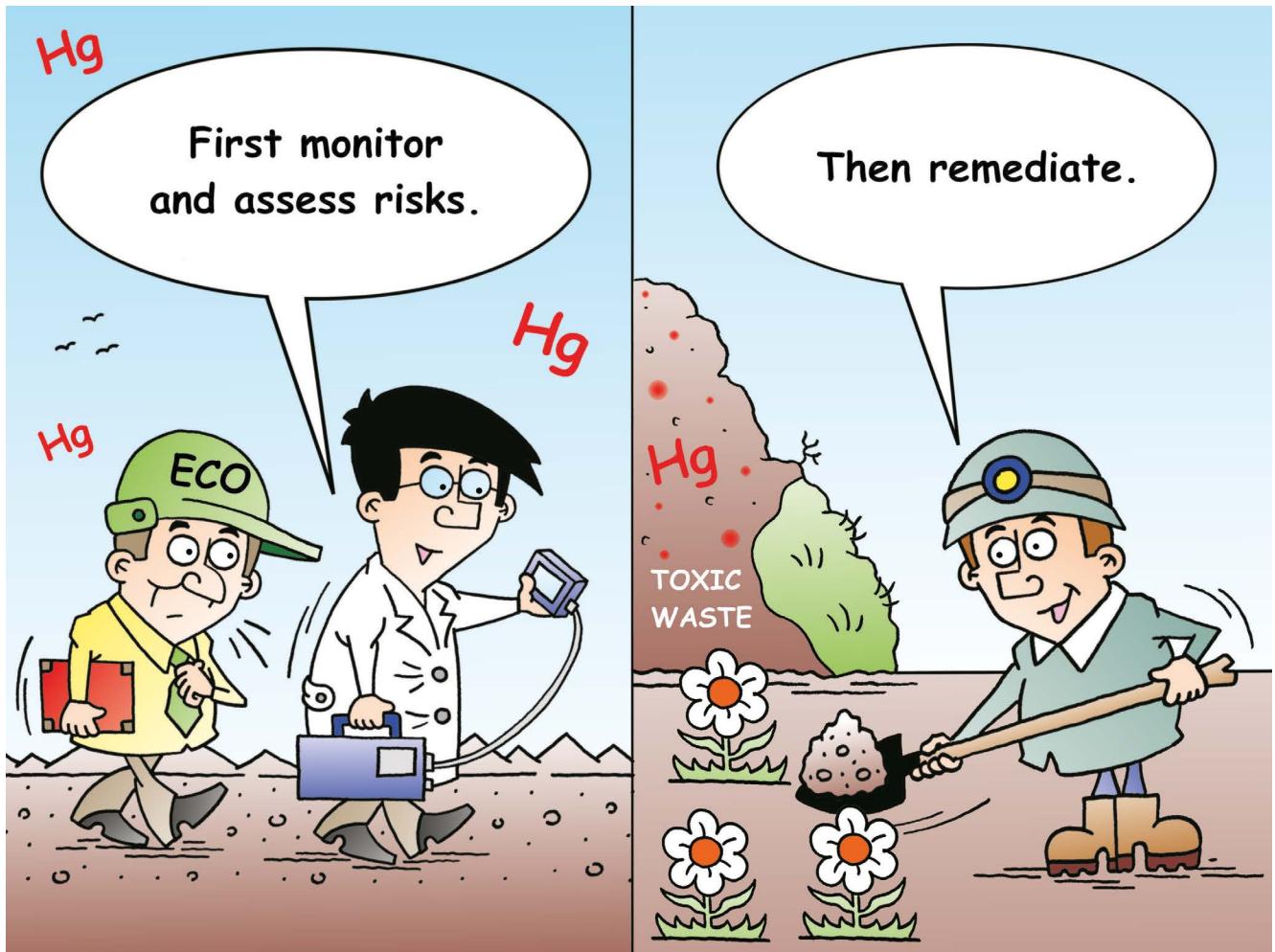


Many countries and stakeholders – sometimes with competing interests – agreed on the Minamata Convention on Mercury in 2013. The common themes that united the negotiators were that mercury risk reduction is necessary for the environment and human health, and that achieving the reduction requires global action and collaboration.

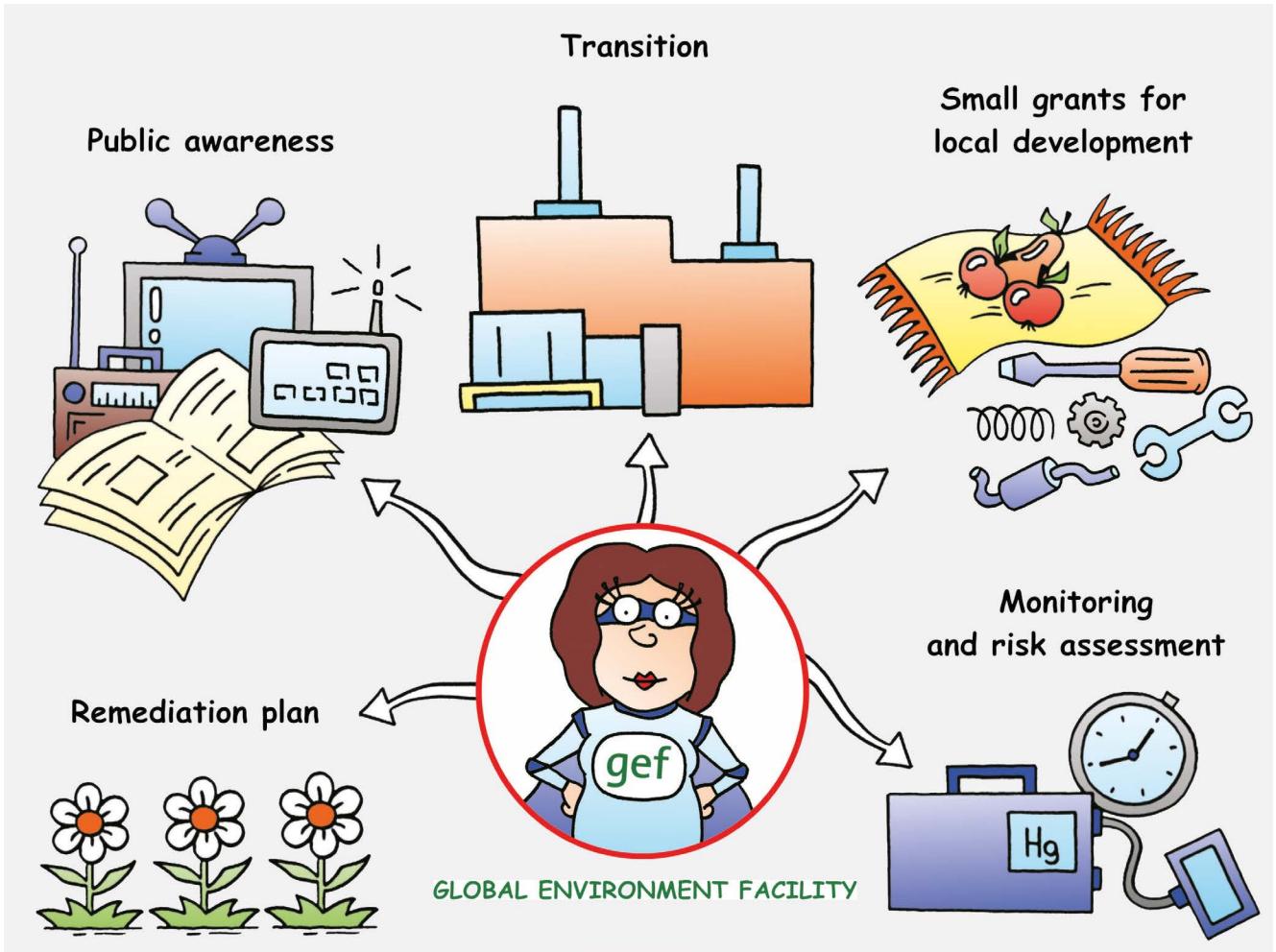




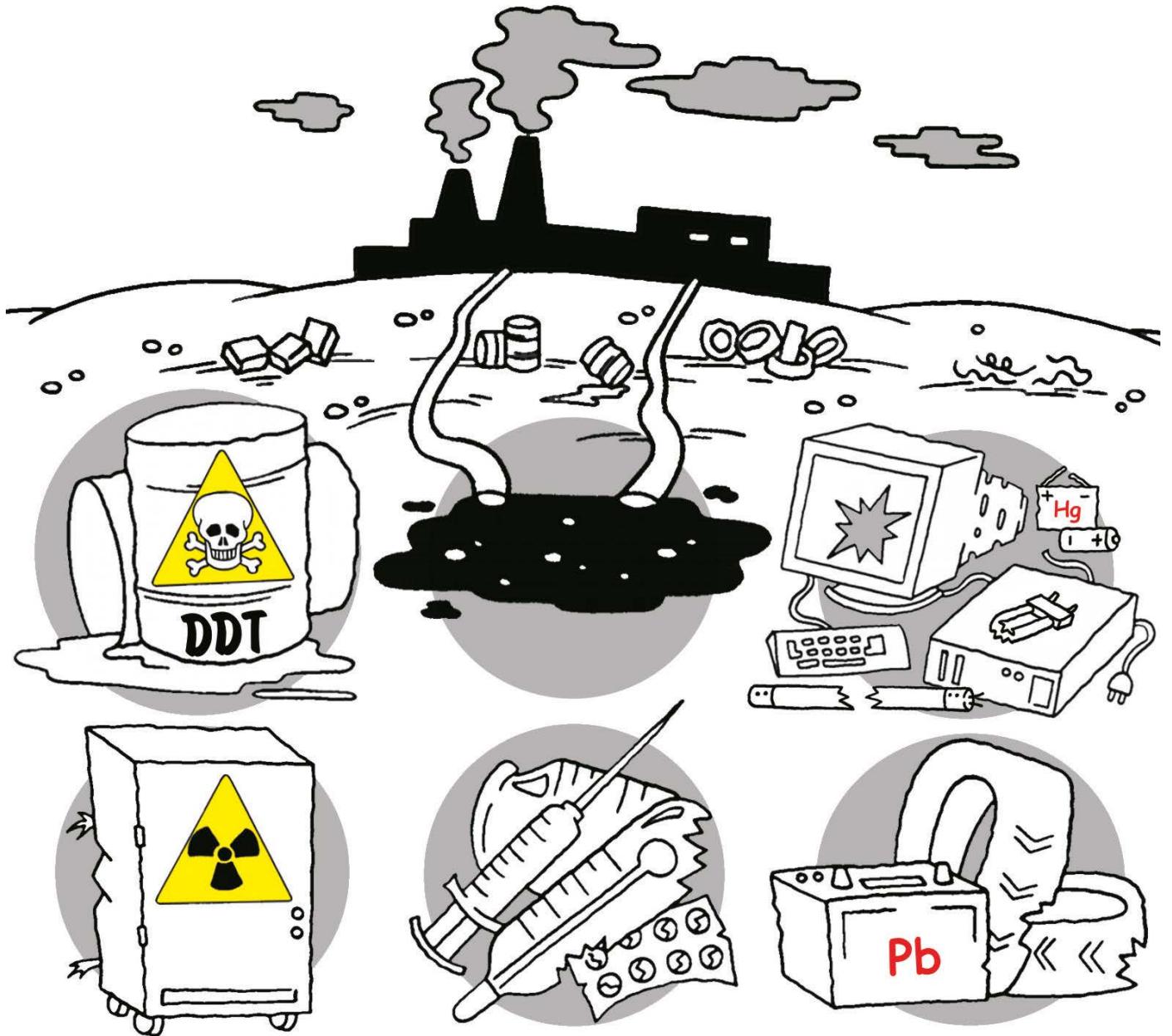
The Minamata Convention on Mercury will tighten control and regulations on mercury export.

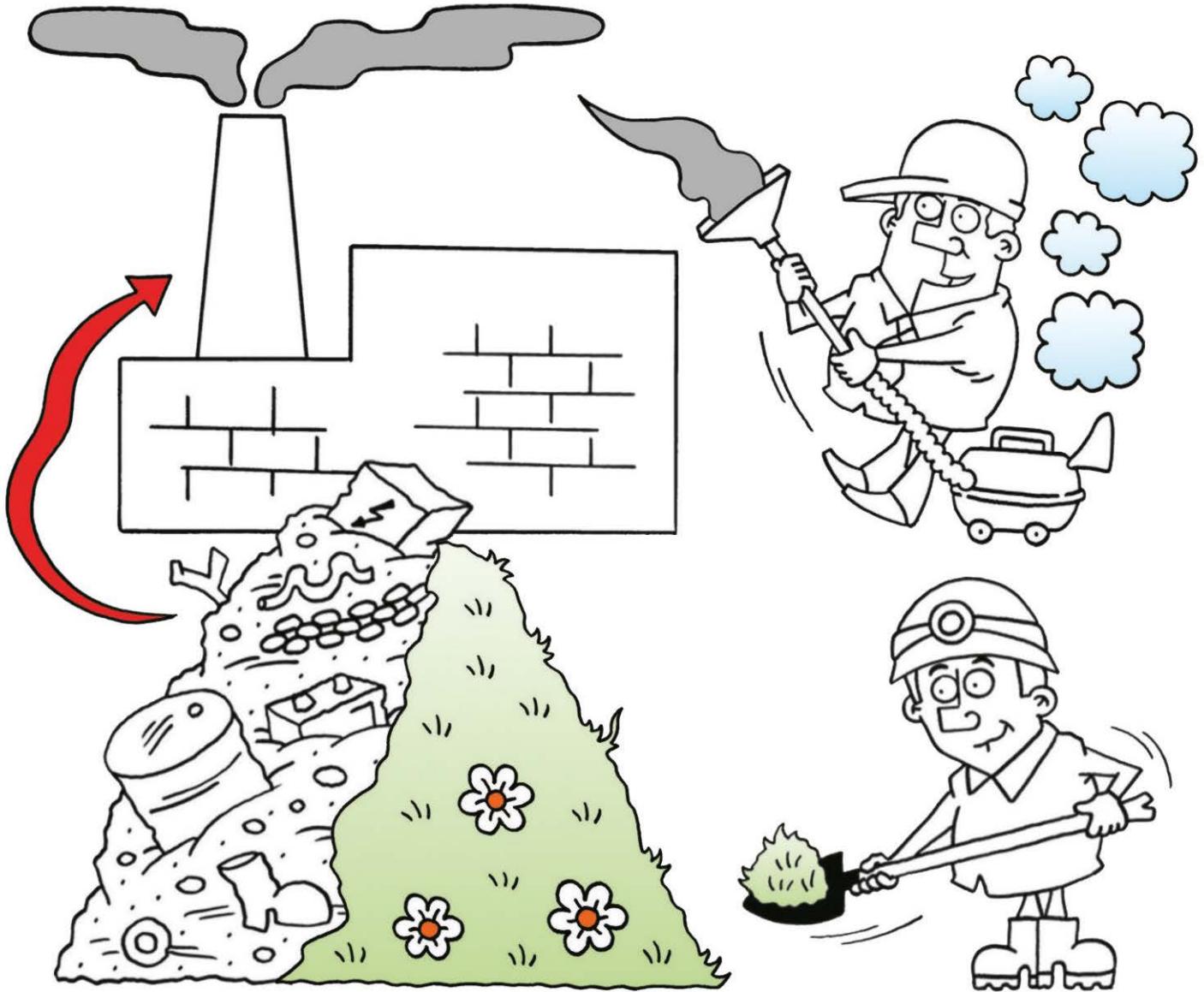


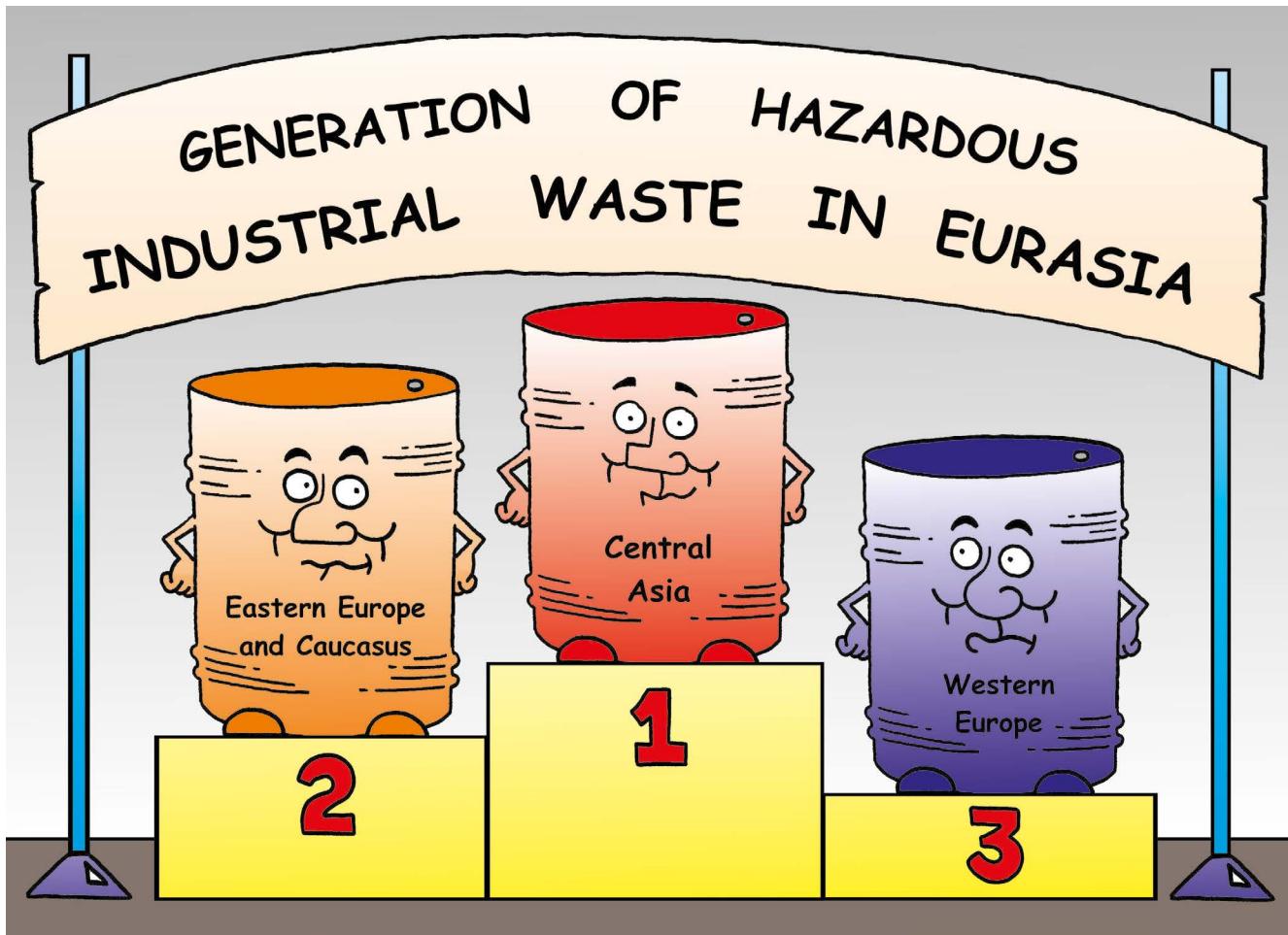
Monitoring and risk assessment provide the information necessary to prioritize and implement risk management and remediation measures.



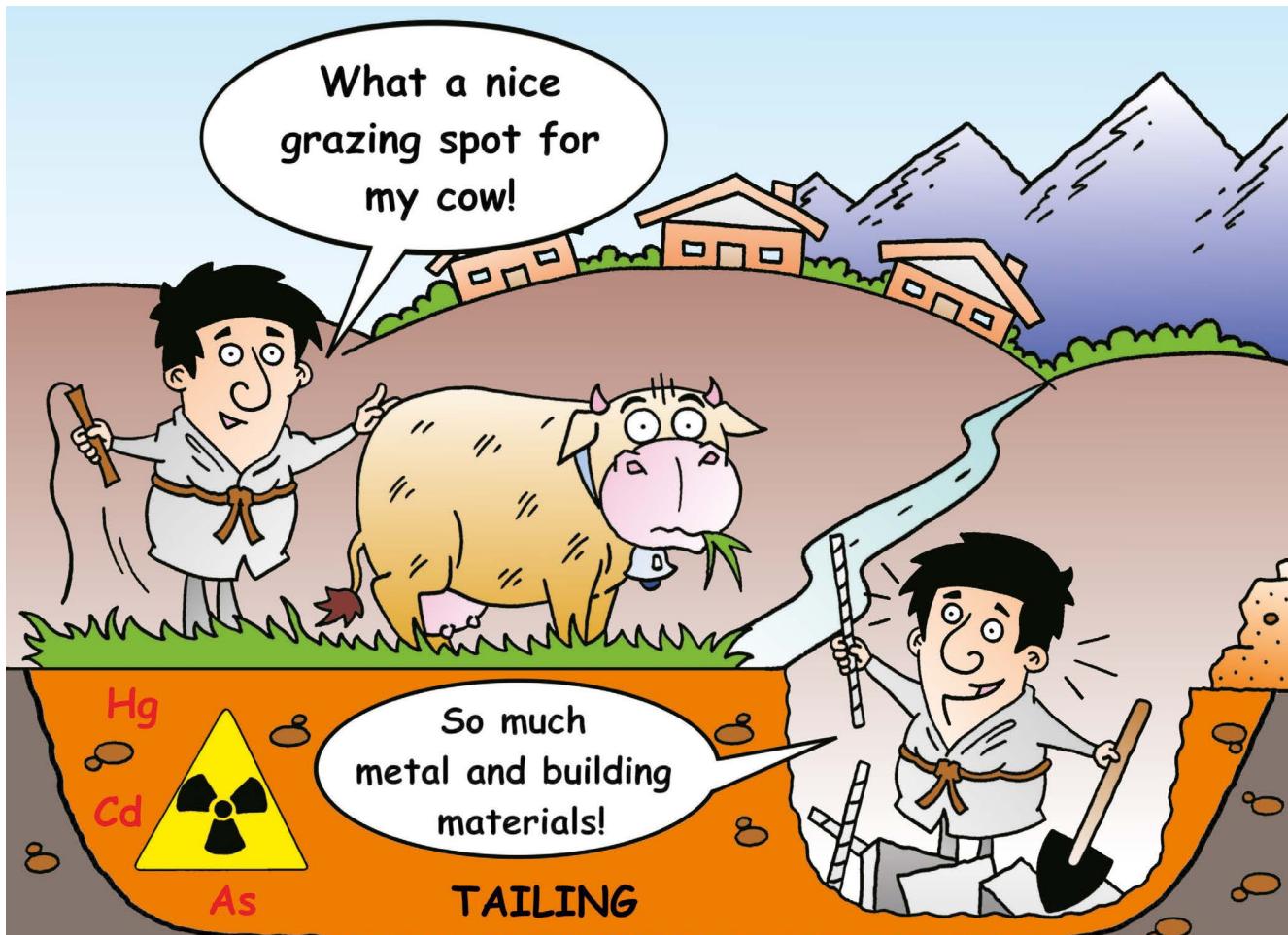
The Global Environmental Facility is one of the international funding instruments that supports measures on mercury risk reduction and development alternatives.



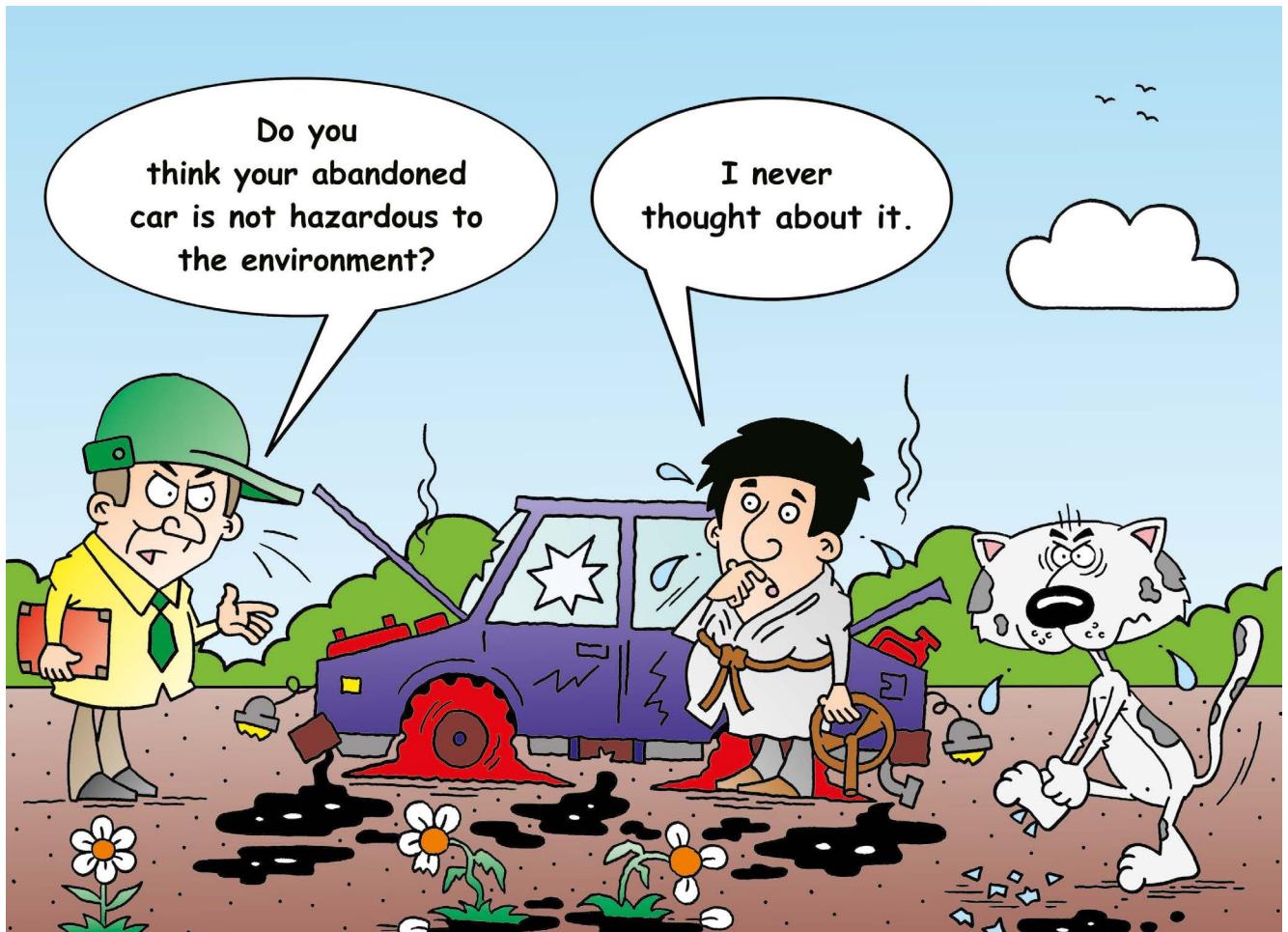




Its massive amount of industrial waste makes Central Asia the waste champion of Eurasia.



The grazing of animals on old tailings sites and the salvaging of materials left there are risky practices that may expose people to radioactive or toxic contamination.



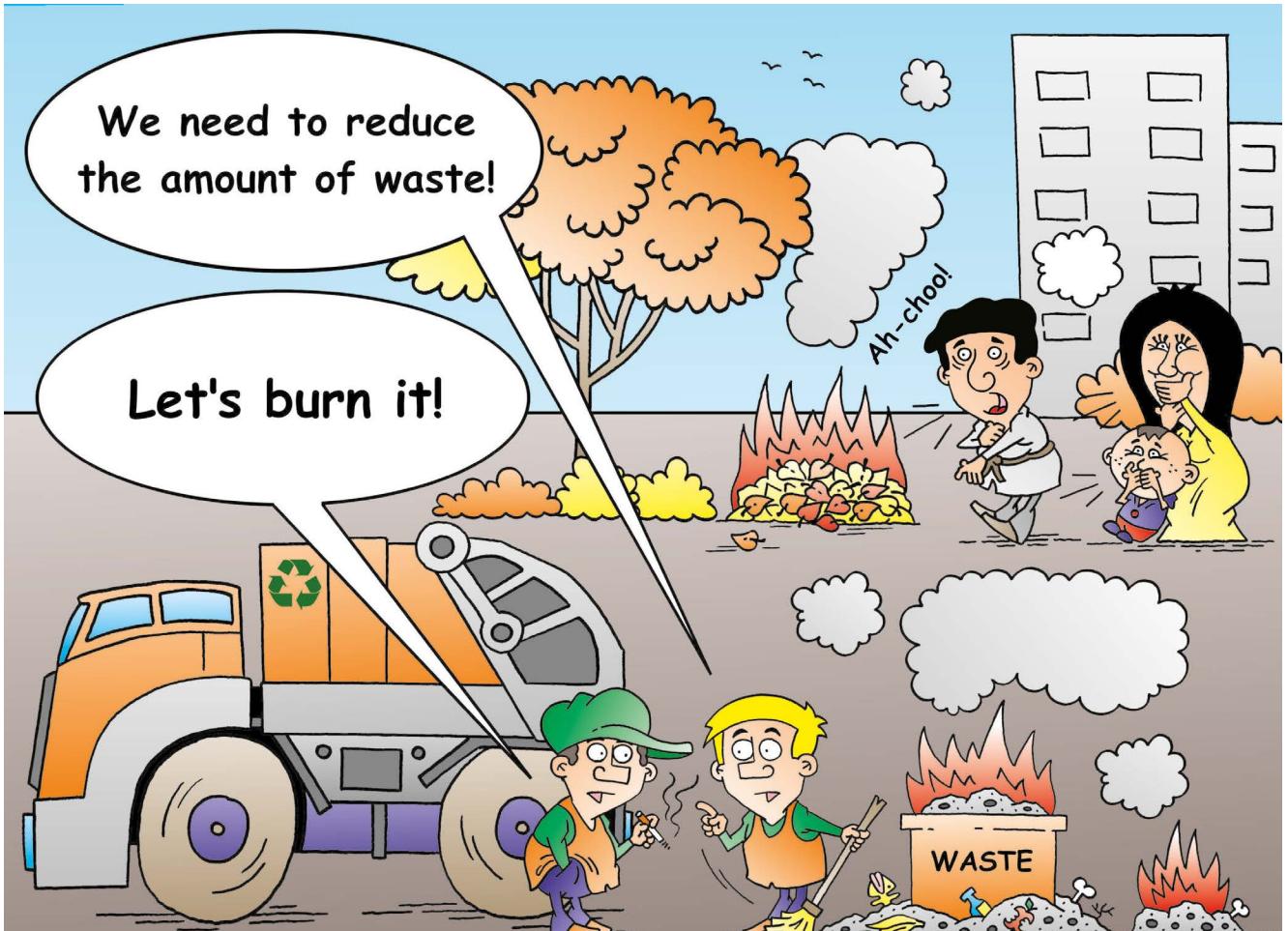
The population is unaware of the hazardous substances in cars, other machines and home electronics, and does not appreciate how end-of-life abandonment of these items may harm people and the environment.



The environmental awareness of local tourists visiting nature parks is often low. While visitors may consider litter to be simply a visual problem, the waste may harm wildlife.



The dearth of recycling facilities reflects the attitude of the population:  
let the scavengers do the recycling.

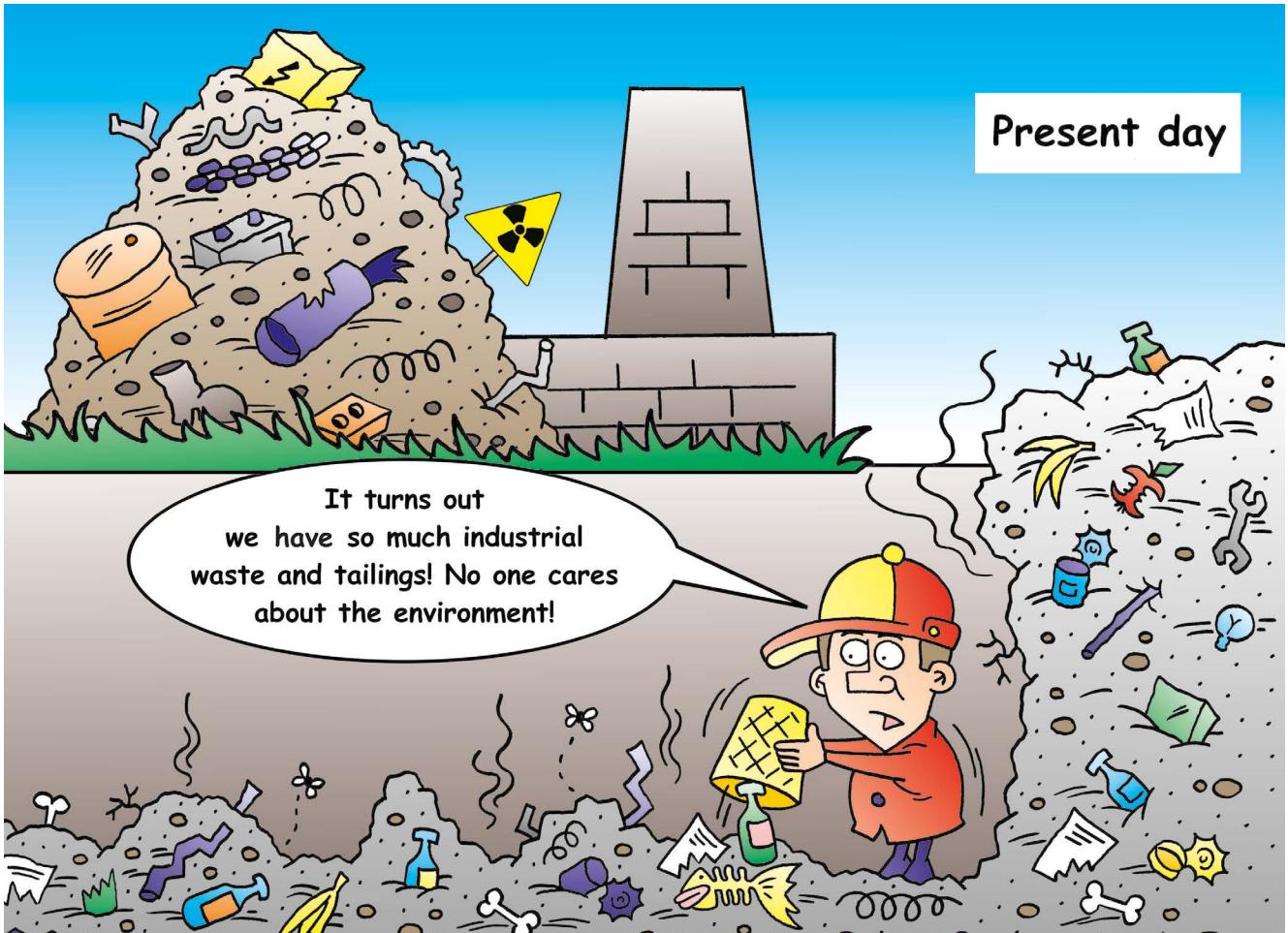


The burning of leaves, other street garbage and waste at collection sites can cause adverse health effects among urban residents.

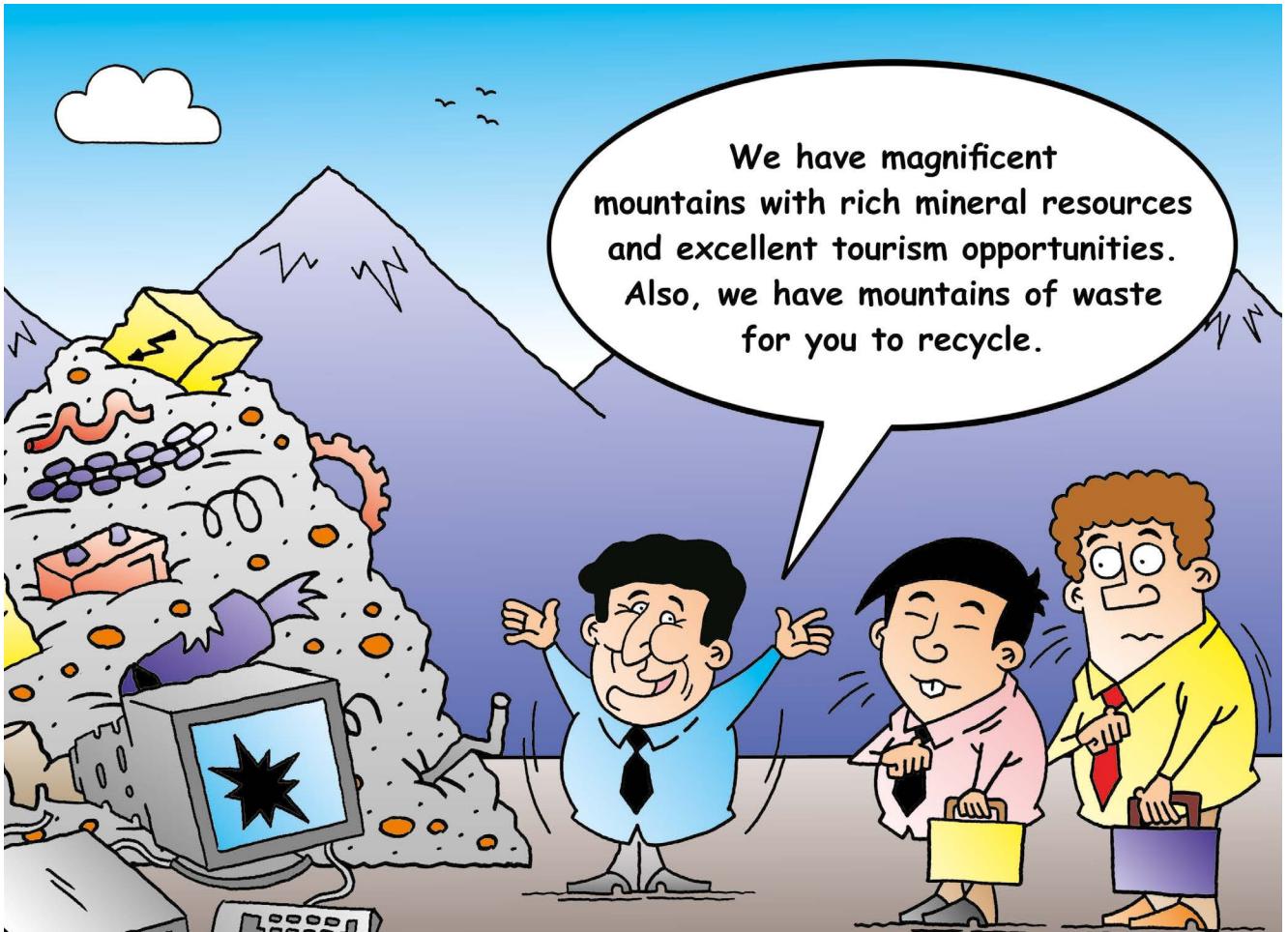


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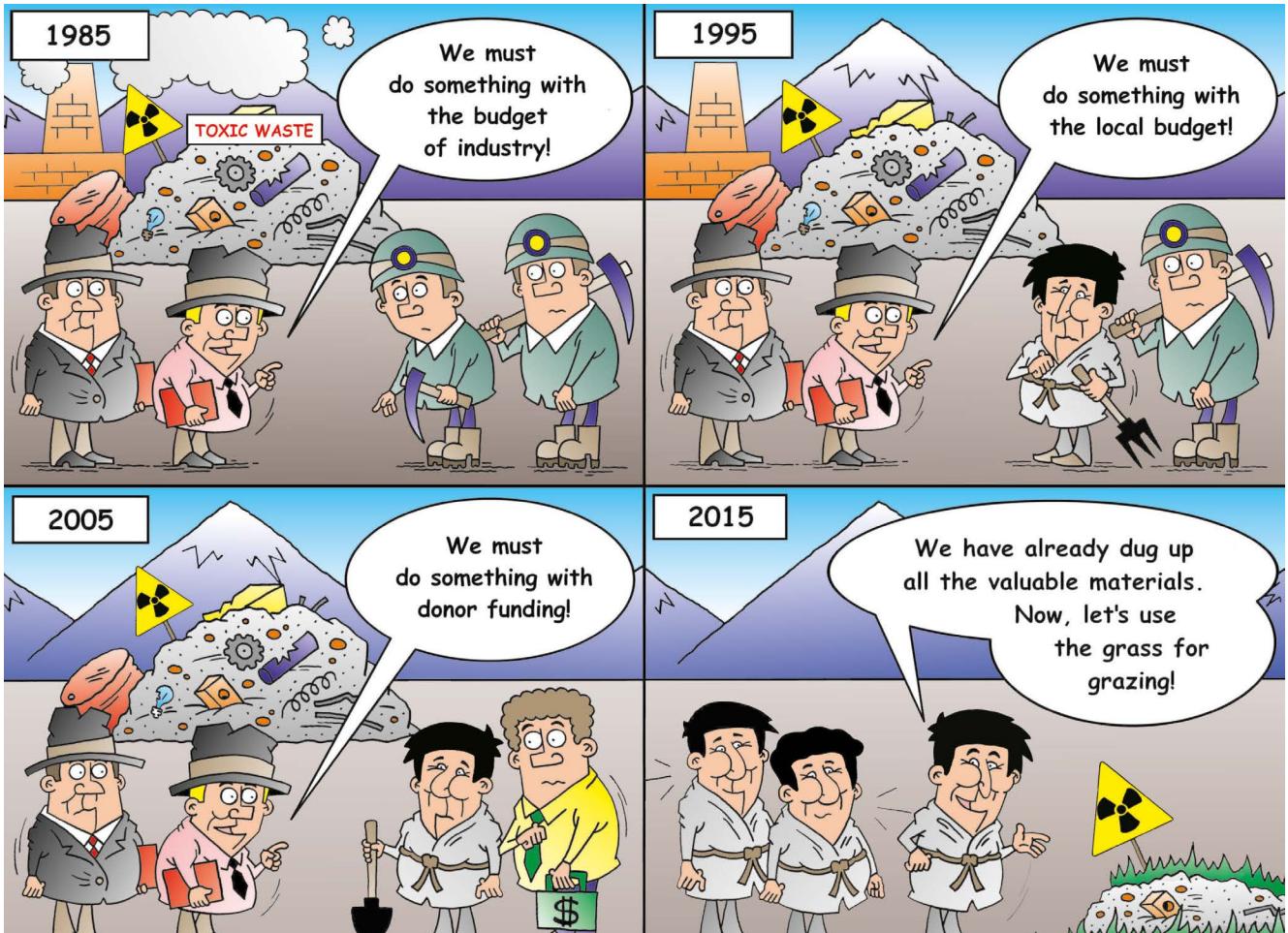
The Soviet era had good waste management at the citizen level, but lacked the necessary controls over and public knowledge of hazardous industrial waste.



Now there are fewer opportunities for citizen waste recycling, and municipal waste is a growing problem. At the same time, public attention shifted to the industrial waste legacies and together with improved technologies reduced hazardous industrial waste.



Central Asia has accumulated vast amounts of waste, much of which can be reused.



Changes in industry ownership after independence left the clean-up of legacy pollution to local authorities with no money for the work. The search for donors failed, and in the end nobody took care of the problem.



The population and the government tend to focus on a narrow group of industries while ignoring industries that may be more dangerous.



The general lack of awareness about materials containing heavy metals or hazardous liquids complicates the management of these wastes.



Unaware that obsolete and banned agricultural chemicals become less useful and often present serious environment and health risks, some people illegally excavate these chemicals for their own use or for resale.



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The excessive application of pesticides was a common and environmentally harmful practice in the past. Now, many farmers are switching to biological controls, and are reaping both better results and the economic advantages of bio-products.

