The global chemical industry has grown tremendously over the last two decades. With global sales soaring to 5.68 trillion, it became the second-largest manufacturing industry in 2017 (1). The industry also shows no signs of stopping as sales are expected to double by 2030, but with the industry’s undeterred expansion, there are growing concerns over the adverse effects on environmental and human health. In 2021, the World Health Organization (WHO) estimated that around 2 million lives and approximately 53 million disability-adjusted life years (DALYs) were lost in 2019 due to exposure to selected chemicals. It was higher than the estimated 1.3 million lives and 45 million disability-adjusted life-years reported in 2016. WHO also stated that this disease burden of chemicals is preventable and that sound management and the reduction of chemicals in the environment are answers to such woes (2).

With a growing pile of evidence linking chemical exposure and health risks, global and national authorities have initiated steps to minimize exposure to toxic chemicals and reduce the risks of harmful health effects. The foundation for sound chemical management has been laid in many countries through various regulatory instruments, policy approaches, economic instruments, voluntary programs, and a number of chemical risk management approaches. Legal instruments such as laws and regulations...
set standards and provide governmental authorities with the power to inspect and enforce these standards. In due course, the developing countries, which have emerged as the manufacturing hub of chemicals since globalization, have come up with plans and policies to regulate chemicals.

**REACH: The beginning of a new era for chemical regulation**

The global chemical regulations gained momentum after the EU adopted the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) in June 2007 to protect human health and the environment from hazardous chemicals. With time, REACH established itself as a Europe-wide uniform legal standard with implications for producers, importers, formulators, distributors, and users of chemicals, as well as those producing and/or importing the articles containing these chemicals. It not only changed the ecosystem of chemical production and consumption but also caused a ripple effect on major chemical-producing counties across the globe. Following the adoption of REACH, in August 2007, in what could only be thought of as a North American response to REACH, the United States, Canada, and Mexico signed an agreement in Montebello, Québec, to assess 9,000 chemicals produced or imported in volumes of 25,000 pounds or more (3).

Within a few years of the adoption of REACH, some of the key countries around the world including the United States, Australia, Japan, Philippines, Canada, Taiwan, New Zealand, Switzerland, and China, came up with their own chemical registration protocols under which the chemical registrations and notifications only have to be submitted for:

- So-called “new substances” that are not on the national inventory
- Specific possible high-risk substances that are on the national inventory

Recently, countries like South Korea and Malaysia have also adopted REACH-like regulations to streamline the management of chemicals (4).
Chemical regulations Spur innovation and businesses

A 2021 study conducted by the European Chemical Authority (ECHA) on the Socioeconomic impacts of REACH regulations found that a comprehensive authorization process pushed companies to move away from using substances of very high concern (SVHCs). Out of the 54 chemicals that were subjected to intense authorizations under REACH, the use of almost half of them stopped. Even for the chemicals that were still in use, the usage volume reduced drastically by 97% (5). This indicates that the use of authorized chemicals can be successfully replaced with safer alternatives and technologies.

Business owners often assume regulations to be obstacles to growth but it isn’t always the case. South Korea introduced its first version of REACH in 2015 (a new version was released in 2019) to archive information on chemicals, and protect human health and the environment (6). They even expanded the regulations to hazard characterization, labeling, and monitoring. Despite such increased scrutiny, the industry continued to grow. In 2020, the country ranked 5th globally for its production level scale and garnered increased interest from U.S., European, and ASEAN countries for the import of polypropylene (PP), low-density polyethylene (LDPE), polycarbonate (PC), and styrene butadiene rubber (SBR) (7).

Even the largest chemical manufacturing center in the world, China, is part of the global push toward the safer use of chemicals. Whenever a new chemical is imported or manufactured in China, it is required to be registered with the State Environmental Protection Administration (SEPA) under the State Chemical Management, in addition to the Environmental Protection Act-1986, which contains legislation to minimize the environmental risks associated with the chemicals. Although these rules are effective and useful, most of these rules have adopted downstream approaches to regulate the chemicals instead of the more extensive “up-to-down-“life cycle” approaches as seen in the EU REACH and REACH-like regulations. There is no institutional mechanism in place to get the chemicals registered after evaluating and assessing the toxicity and health impact of the chemicals. This also might lead to the dumping of those chemicals that may have been banned elsewhere. India has released their fifth draft of the Chemical Management and Safety Rules (also known as Indian REACH) but it has yet to be finalized. As India is exploring being the hub for chemical production and use, it is paramount for the country to expedite the chemical regulation and build a robust mechanism that will not only protect the health of its citizens but will also accelerate the growth of the chemical industry.

by Piyush Mohapatra, Senior Programme Coordinator, Chemical and Health Programme, Toxics Link

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India is lagging behind

The Indian chemical Industry is a major contributor to the growing Indian economy as it accounts for about 7% of the country’s Gross Domestic Product (GDP). The market size of the Chemical and Petrochemical sector is estimated to be ~$178bn, making India the 6th largest producer of chemicals in the world and the 3rd largest in Asia (9). The Indian chemical industry is highly diversified and can be largely classified into bulk chemicals, specialty chemicals, agrochemicals, petrochemicals, polymers, and fertilizers. India is the leading exporter of some of these chemicals, especially dyestuffs and dye intermediates.

As India sets its vision on becoming a five trillion-dollar economy, the chemical industry can play a key role in helping the country achieve the same. The growth of the chemical sector in India is a welcome step but the question arises of how far India is willing to deal with the health and environmental challenges that come from unmonitored chemical production and use.

The trade of chemicals in India is largely unrestricted except for a few highly toxic chemicals. The country is a party to global chemical conventions like the Stockholm Convention on POPs, Montreal Protocol, the Minamata convention on mercury, and the Strategic Approach to International Chemical Management, in addition to the Environmental Protection Act-1986, which contains legislation to minimize the environmental risks associated with the chemicals. Although these rules are effective and useful, most of these rules have adopted downstream approaches to regulate the chemicals instead of the more extensive “up-to-down-“life cycle” approaches as seen in the EU REACH and REACH-like regulations. There is no institutional mechanism in place to get the chemicals registered after evaluating and assessing the toxicity and health impact of the chemicals. This also might lead to the dumping of those chemicals that may have been banned elsewhere.
MENSTRUAL HYGIENE MANAGEMENT

Is it time to makeshift?

In a country where 336 million women fall under the reproductive age group, menstrual health and hygiene is a subject of importance. On average, a menstruator will have approximately 400-500 periods, which would mean around 2000-2500 days of menstrual bleeding over a lifetime. Even though this is a common process in the life of every menstruator, unfortunately, many aspects related to this subject are shrouded in silence due to various stigmas and cultural taboos associated with it. Menstrual Products, their usage and disposal have a similar fate when it comes to having a conversation around this subject. The issue of menstrual product disposal is not only confined to low-and middle-income countries, but is an emerging concern throughout the world.

Women use various products across the globe to absorb the menstrual flow. They include sanitary napkins/pads, tampons, menstrual cups and period panties. According to various market research and surveys, Sanitary Pads are the most commonly used product both in India and globally. It is estimated that over 12.3 billion disposable sanitary pads are used in India every year. Disposable sanitary pads are single-use in nature and are made up of 90% of plastics (one sanitary pad contains plastic almost equivalent to four plastic bags). Disposable sanitary products are single-use in nature, meaning once used, they are discarded.

A study conducted by Toxics Link in 2021 revealed that some women burn these pads, flush it or bury it as a means of disposal. Sanitary waste incinerators (machines which disposes the sanitary pads by burning them and converting the net product to ash) was also one of the methods used to dispose these pads. However, it was found that majority of women (40%) women dispose their sanitary pads in the regular household bin along with other waste. Another survey conducted by Toxics link on waste workers (part of the same study) highlighted the fact that none of the waste workers separately segregate this waste. This means that almost all the sanitary pads which are disposed along with regular waste ends up in the landfill, contributing to the already mounting plastic pollution. It is an established fact that any form of plastic takes about 500-800 years to disintegrate. Newer findings now reveal that plastic in the process of disintegrating converts to microplastic (tiny plastic particles less than 5 millimetres in length) which enters our food chain. Studies are now being reported worldwide highlighting the presence of microplastics in seafood, salt as well as inside the human body. Moreover, most of these pads are not disposed of in a proper manner thus emanating health concerns for millions of informal waste workers like rag pickers who rummage through waste to find valuables on a daily basis. They are at continuous risk of developing health issues like Hepatitis, HIV and Tetanus as most of them work without wearing proper PPE.

The problem is growing day by day as more and more girls prefer to use the conventional disposable sanitary pads. An increase in pad usage directly equates to increase in used pads ending up in the landfill. In terms of legislation, the government in 2016 released a guideline for menstrual waste management under the solid waste management rules in India. It requires the brand owners who sell or market their products in non-biodegradable packaging material, to put in place a system to collect back the packaging waste generated due to their production. They are also required to educate the masses for wrapping and disposal of such products. The guidelines recommend citizens to wrap the use menstrual products in suitable wrapping material and disposed in dry bin for non-biodegradable waste. However, implementation of these rumbles on ground is a far-fetched reality.

So, now the question arises, what can we do as responsible citizens?

Vintage is the new in. Maybe now is the time to explore options like Reusable cloth pads which have undergone multitude of changes over the years to suit the needs of today’s females. Newer innovations like Period Panties and menstrual cups are also environment friendly. As making a shift to sustainable products, (subject to availability and resources) is a gradual process for some, disposal of used sanitary products should be done in the Dry waste bin after wrapping it in a suitable packaging material. Such waste should also be separately marked and handed over to waste collectors.

The road to making sustainable menstruation a reality is slow but not impossible. This new year let us take the first step towards an environment friendly period management.

Dr Aakanksha Mehrotra,
Programme Coordinator – Waste & Sustainability, Toxics Link
In recent years, extreme weather events, such as temperature anomalies, drought, and floods, have become more frequent because of climate change due to greenhouse gas emissions. Though most emissions come from other sectors, waste is the fourth largest sector of greenhouse gas emissions; the organic and inorganic waste we produce dramatically contributes to global greenhouse gas emissions.

India is the world’s third-largest emitter of greenhouse gases (GHGs) after China and the US. Emissions from India rank third in the global list, accounting for 2.46 billion metric tonnes of carbon or 6.8% of the total global emissions. However, India’s per capita carbon emissions are still low at 1.84 tonnes compared to the 16.21 tonnes in the USA.

Further, India is the world’s third-largest waste generator, with an estimated 65 million tons produced annually. Municipal Solid Waste is more than 62 million tonnes of this total annual waste generation. As per an estimate, municipal solid waste generation will increase to 165 million tonnes by 2031 and up to 436 million tonnes by 2055. This would likely contribute to the country’s overall greenhouse gas emissions and, thus, its contribution to climate change.

Waste contributes to climate change as the production and disposal of waste generate greenhouse gases, such as carbon dioxide and methane. These gases trap heat in the Earth’s atmosphere, leading to an increase in global temperatures, known as the greenhouse effect. Further, the generation of greenhouse gases from waste varies significantly depending on many factors, including the type of waste, the methods of waste management and disposal, and the local climate and environmental conditions.

Landfills are a significant source of waste-related greenhouse gas emissions. The biogas generated from landfills usually contains methane and carbon dioxide and may contain ammonia or organic compounds. When organic materials such as food waste and garden trimmings decompose in the open, they produce methane. Methane is about 28 times more effective at trapping heat in the atmosphere than carbon dioxide.

Last year, more than half of all methane emissions measured globally from landfills were in Asia. India accounted for nearly a quarter of the total.

In India, landfills are a major source of waste-related greenhouse gas emissions. For instance, as Bloomberg reported, on March 22, the Ghazipur landfill of New Delhi emitted nearly 2.17 metric tons of methane within an hour. Lots of waste sites across the country are also major emitters. Moreover, most of the landfills...
emissions from landfills, incineration, and the production and transportation of waste.

However, it is essential to note that these estimates may not be comprehensive and may not capture all sources of greenhouse gas emissions from the waste sector.

**Efforts to reduce waste and greenhouse gas emissions:**

Reducing waste and increasing recycling can help mitigate these impacts and reduce the overall contribution of waste to climate change.

To reduce the burden on landfills and on waste handling and management systems, consumers could play a necessary role by adopting prevention and minimisation strategy in consumption patterns. The contribution of waste to greenhouse gas emissions in India may change over time if the Waste Hierarchy in the waste management approach is rigorously followed. This will need contribution from all the stakeholders involved in all stages of waste generation to management—from waste generating to waste collecting to recycling and final disposal.

From the Most to the Least Preferred Options for Waste Management

In recent years, India has been working to address its waste management challenges and reduce the contribution of waste to climate change. This includes increasing recycling, reducing plastic use, and promoting clean energy in the waste management sector.

**Increasing recycling:** India has been working to improve recycling rates to reduce waste sent to landfills. This includes initiatives to promote the use of recycled materials in the manufacturing sector and encourage individuals and businesses to recycle their waste.

**Promoting clean energy in the waste management sector:** India is working to increase the use of clean energy in the waste management sector, including biogas and renewable energy sources such as solar and wind power.

**Establishing waste-to-energy facilities:** In addition, India is working on the development of waste-to-energy facilities, which involve the incineration of waste in order to produce energy. These facilities have the potential to help reduce emissions of greenhouse gases by cutting down on the quantity of garbage that is dumped in landfills and by displacing the usage of fossil fuels in the generation of electricity.

Though changing waste management and treatment are just a few examples of the efforts being taken in India to reduce waste and greenhouse gas emissions. However, except for some cities and towns, their wider on-ground impact across the country has yet to be seen. There is still much work to be done to fully address these issues and mitigate the impact of waste on the climate. There is a need for a circular economy to reduce emissions and fight climate change. With less waste generation and more waste being recycled, less must be landfilled or incinerated, which contributes to protecting the climate.

Last but not least, each of us can also contribute to mitigating climate change by adopting a zero-waste lifestyle, keeping materials out of our landfills, and reducing our carbon footprint.

**From the Most to the Least Preferred Option for Waste Management**

- **Prevention**
  - The Most Preferred
- **Reduction**
- **Reuse**
- **Recycling**
  - The Least Preferred
- **Recovery**
- **Disposal**

- **Reducing the use of plastic:** India has implemented several measures to reduce the use of plastic, including bans on certain types of single-use plastic products and initiatives to promote the use of alternatives such as cloth and paper bags.

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by Dr Nutan Maurya
Programme Coordinator – Waste & Sustainability, Toxics Link
‘Quotes from the Earth’, an Environmental film festival organized by Toxics Link and India International Centre (IIC) opened in the capital city of Delhi on 1-2 December 2022. The festival, supported by the Swedish Society for Nature Conservation and Friends Foundation International, was inaugurated by Shri Rahul Ram, a celebrated bass guitarist and lead vocalist for the rock-fusion band Indian Ocean, who is also known for his work as an environmentalist and social activist. The two-day festival stimulated a dialogue on environmental struggles and concerns through films and panel discussion.

The festival aims to sensitize people on a healthier and cleaner tomorrow using the medium of films. 26 films, including critically acclaimed films such as Sherni, directed by Amit V. Masurkar, and The Last Seed, directed by Andrea Gemma were screened during the 2-day environmental film festival. The films screened in the festival were on different themes, spanning across ecological justice, water, conservation, and sustainable living to understand and empathize with the world’s most critical environmental issues. The film festival served as an opportunity for people of Delhi NCR to experience films from Russia, Ukraine, Greece, Canada, the United Kingdom, Turkey, Venezuela, Indonesia, Nepal, and many other nations, and also witness thought-provoking films by renowned Indian environmental filmmakers.

The film festival opened with a cultural programme which included an invocation dance by the students of Shri Ram School - Aravali campus, and a group song on five elements by students from the Shriram Millennium School, Gurugram. The cultural programme also included a thought-provoking dance performance by The Creation Dance Group, a contemporary dance troupe which showcased the issue of Ganga pollution. The film festival, in its 9th edition, organised by environmental group Toxics Link was held at the India International Centre, 40, Max Mueller Marg, Lodhi Road, New Delhi.

By Neha Shukla,
Programme Officer, Information and Communication, Toxics Link.
Mridul: How were your early childhood experiences with environmental activism?

Ashish: My early youth experiences with environmental activism – particularly the protest against the proposed hunting of the Great Indian Bustard by Saudi Arabian princes and tree felling in the Delhi Ridge Forest in the late 1970s, as also trips to areas with movements like Chipko - profoundly impacted me. It made me ask pertinent questions like: Can wildlife conservation happen at the cost of human rights? Can development take place at the cost of the natural environment? Can environmental issues succeed without dealing with gender inequalities?

There is a long-standing debate about development vs. the environment, and my conviction is that the idea of development per se itself is deeply flawed. Instead, we need different notions of well-being emerging from different parts of the world, keeping the conservation of our rich fauna and flora, as also the dignity and rights of humans, at the forefront of efforts.

Mridul: Could you elaborate on how Kalpavriksh has led the way in projects like the National Biodiversity Strategy & Action Plan?

Ashish: We were given the responsibility of framing India’s NBSAP in the early 2000s, by the central Ministry of Environment and Forests. Unfortunately, the draft national plan was rejected by the central government after a lengthy four-year process involving tens of thousands of participants, bottom-up visioning, and over 100 municipal, state, ecoresgional, and thematic action plans. I believe this was because the draft plan was so people-and-nature centered that it required significant adjustments to macroeconomic and political systems, which were perhaps too radical for the government. For us, it was evident that India’s biodiversity would not survive without such transformations. If we consider that plan after plan for conservation has failed to stem the overall loss of biodiversity, it appears that we were right.

Mridul: Was the Scheduled Tribes and Other Traditional Forest Dwellers [Recognition of Forest Rights] Act, 2006, a significant landmark? Why have some conservationists opposed this law?

Ashish: This policy change represents one of the most important ones since Independence, since it reverses 200 years of centralised rule over forests initiated by the British colonial government and continued after Independence. However, it is important to keep in mind that this was more of a rights-based movement than a movement led by “conservationists” (by which I mean those groups in urban areas working formally on wildlife issues). The Forest Rights Act (FRA) was opposed by some of these conservation organisations, and by the forest department in many states, ostensibly out of concern that it would result in the destruction of forests, but more likely because it would result in the loss of the control by the department and by a handful of elite conservationists that have dictated our policy for decades.

Without discounting the possibility that the misuse of such a law, particularly its provisions on individual rights to forest land, could in fact cause ecological harm (and there is some evidence that this has occurred), our position has been that its more significant impact would be to strengthen forest (and wildlife) conservation, particularly if communities are supported in managing community forest areas over which they can claim governance rights. Indeed, as per our experience, since 2008 communities that...
have been able to claim collective rights using the FRA (which unfortunately are very few across India), have used this to prevent harmful “development” projects and activities like logging and monoculture plantations, and strengthen their own conservation as also their livelihoods through sustainable use.

Mridul: How would you envision India’s biodiversity in 2050?

Ashish: Biodiversity needs to be preserved not just in a few islands with protected areas but throughout the land and seascape. This indicates that a lot more rethinking and reorienting are required in human activities. For instance, we urgently need to switch to (or go back to) farming, pastoralism, fisheries and forestry that is biologically diverse, small-producer based, and organic. We also need to make human settlements, especially cities, more wildlife-friendly, through green corridors, urban wilderness areas, saving old native trees and urban wetlands, etc. And we need to ensure that massive infrastructure and industries are not allowed in the most important biodiversity areas. Unfortunately, the Prime Minister recently announced that his government has reduced ‘no-go’ areas by a whopping 10,000 square kilometres!

To shift from a concentration on mega-industries and mega-infrastructure to decentralized, smaller-scale initiatives that improve livelihoods without causing considerable ecological harm, we need to reconsider what “development” means. We must also support groups fighting for justice for Dalits, women, Adivasis, and other oppressed or marginalized social groups, recognising that no ecological justice is possible without also social justice (and vice versa!).

There are thousands of initiatives at meeting needs and aspirations in ways that are ecologically sustainable and socially just, as are demonstrating through the Vikalp Sangam network and website. These need to be paid more attention to, learnt from, supported, and networked to spread wider and wider, even as also challenge the fundamental forces of destruction and inequality including capitalism, state-domination, patriarchy, casteism, and human-centredness.

Mridul: How do your account for the fact that India has perhaps lost few of its large vertebrates to complete extinction than many other countries, despite being one of the world’s 17 mega-diversity countries and home to four biodiversity hot spots?

Ashish: I think the most important reason for this is traditional way of life of communities that have learnt to co-exist with wildlife, tolerating certain levels of crop and animal damage, even sometimes loss of human life, or even actively conserving ecosystems and wildlife.

And over the last couple of decades, unfortunately, even many protected areas have been opened to mass tourism, or diverted for infrastructure and industry. This, as also perverse influences of modernity and politics, has also led a breakdown in local community attitudes towards (or capacity for) coexistence, as also increasing human-wildlife conflicts. All this needs to be changed with a greater focus on community-led or co-management approaches, which we have been advocating for several decades, and showing as eminently feasible through documentation and case studies.

Mridul: What are you suggestions/recommendations for the young environmentalists or aspiring environmental enthusiasts?

Ashish: Given my own experience (and that of my colleagues in Kalpavriksh) of getting into environmental activism in my teens, I think youth can do a lot! They can document and spread awareness about environmental issues, take action to make their own educational institutions or their residential colonies more eco-friendly, join people’s movements or support them in various ways, take up cultural activities to spread the word, and so on. It is important however to get as well-informed as possible, before taking such actions; and to do things in collectives, even as we try to live more responsible individual lives. Remember: we are never too young (or too old!), never too little or small, to do something meaningful!
HAZARD CAUSED BY USED OIL AND POLICIES GOVERNING ITS CONTROL

Srishti Mishra


According to the United State Environmental Protection Agency (US EPA), Used-oil is defined as any petroleum-based oil that has been refined from crude oil or any synthetic oil that has been used and as a result of such use, is contaminated by physical or chemical impurities (US EPA, 2022). Considering the detrimental effects of the used oil, it is categorized under the decree of hazardous waste by international policies and hence acknowledged by countries at their levels.

Used oil is classified as hazardous waste and is regulated under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016, as issued by the Union Ministry of Environment, Forest, and Climate Change (Prakash, 2017). As mentioned in the “Guidelines for Environmentally Sound Recycling of Hazardous Wastes” (Central Pollution Control Board [CPCB], 2010), under HW rules, waste oil includes crude oil, emulsion, tank bottom sludge, and slop oil spilled from petroleum refineries/installations or ships and can be used as fuel in furnaces for energy recovery if it meets the specifications laid out in Part B of Schedule V, either as is or after reprocessing.

Since it contains dangerous compounds and metals that contaminate used oil throughout its life cycle, it is categorized as a hazardous material. If exposed to any water body or leaches down a drain, used oil obtained from a single oil-change process can endanger drinking water supplies (around one million gallons of fresh water which is equivalent to annual supply for almost 50 people) and aquatic life by contaminating ground and surface waters (Rose Foundation, n.d.; US EPA, 2022).

Oils are not particularly hazardous in and of themselves, but contaminants such as additives, breakdown products, and other compounds that may have become mixed with the oils during use can affect its toxicity. Furthermore, because of their tenacity and capacity to spread over wide regions of land or water, oils have the potential to inflict environmental damage. Oil films or coverings can decrease or prohibit air from reaching all types of life forms within an area of land or water, resulting in considerable degradation of environmental quality in those mediums. As a result, used oil is likely to have one or more of the hazardous characteristics (Secretariat of the Pacific Regional Environment Programme [SPREP], 2015)

Oil polluting surface water drastically degrades the water’s ability to support life. The oil inhibits sunlight and hinders oxygen from getting into the water, reducing dissolved oxygen and hence prevents aquatic plants from performing photosynthesis. Toxins in the used oil also causes biomagnification by entering the food chain; aquatic life becomes at stake (Zitte et. al., 2016). Unprocessed used oil burned in furnaces, hazardous chemical substances if released into the atmosphere, pollutes and degrades the air we breathe (Rose Foundation, n.d.).

There is potential in almost all types of waste to be recycled safely, preserving a valuable non-renewable resource while reducing deleterious impact on the environment. The unregulated combustion of spent oils in the cement and heavy industries may result in uncontrolled pollution. Traces of heavy metals present in used oils remain in the product (e.g. cement) or are found in the exhaust gas. Hence, the drawbacks of traditional oil disposal, various research organizations have looked into novel ways to cleanse and recycle spent oils (Katiyar & Husain, 2010)

The utilization of used oil for recycling is particularized in the “Standard Operating Procedure and Checklist of Minimal Requisite Facilities for utilization of hazardous waste (2021)” under Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Used oil collected from service stations and hydropower generation units is pre-treated, centrifuged, and dehydrated, where the water from the oil and sludge is extracted. The generated sludge should be transferred to TSDF (Treatment, Storage, and Disposal Facilities), while
the collected water should be treated in the ETP (Effluent Treatment Plant). The refined oil should be sold to tyre and bitumen manufacturers. The hazardous wastes generated during the recycling of used oil (such as oil sludge, APCD residue, ETP sludge, and so on) must be collected and temporarily stored in inert drums/bags in a specialized hazardous waste storage area prior to being sent to an authorized common TSDF or other authorized facility within 90 days of waste generation, in accordance with the authorization issued by the concerned SPCB/PCC. The Used Oil and Off Specification Products shall be procured from authorized industries under HOWM Rules, 2016 (CPCB, 2021).

Used Oil must be recycled by licensed collectors and processors (Arner Guerre, 2022). Several governments throughout the world have implemented regulations and plans to regulate the disposal of spent oil in order to safeguard the environment (Zitte et al., 2016). The establishment of frameworks and policies is important but supervision of how these ordinances or laws are implemented is crucial. The system of Extended Producer Responsibility (EPR) in managing waste oils is present in countries like Spain, Korea etc; which should be adopted by other countries as well for maintaining the goal of sustainability. Since pollutants don’t restrict themselves within the boundaries of the implementation of the law; they are capable of leaching out in a certain ecosystem and hence waste menace should be controlled!

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Sanitary Pads can be a health hazard!

A new study titled “Wrapped in Secrecy: Toxic Chemicals in Menstrual Products,” released by environmental NGO Toxics Link today, has revealed the presence of toxic chemicals, including Phthalates and VOCs, in organic and inorganic sanitary pads, sold in the Indian market. The study tested most of the major brands of sanitary pads, including organic and inorganic, available in the country, and detected these chemicals that can cause skin irritation, allergic reactions and can be endocrine disruptors for users. The report reveals new information on contaminants found in sanitary pads that can also cause cancer and release microplastic particles into the environment.

Microfibres, the threads of plastic pollution

Synthetic clothing is a huge contributor to microfibre pollution, reports a new study titled “Dirty Laundry: Threads of Pollution – Microfibres” released today by an environmental group, Toxics Link. The new report, which has looked at global studies across the globe, highlights that 124 to 308 mg of microfibres is released per kg of washed fabric during washing, depending on the type of washed garment. The study has also reported that synthetic textiles add approximately 35 per cent to the global release of primary microplastics to the world’s oceans. Apparel made of synthetic materials like polyester, acrylic, nylon, and others consists of plastics and denote around 60 per cent of the clothing resources.
material globally. The study raises serious concern regarding microfiber pollution in India, especially as synthetic apparels are capturing substantial market shares in the country.

**Factsheet on New Persistent Organic Pollutants (POPs)**

The Government of India has ratified seven POPs on 7 October 2020, and paved the way for elimination of these chemicals.

The national implementation process is ongoing. This document gives a snapshot of these seven new POPs with regard to their characteristics, uses, exposure routes, health impacts, regulations as well as alternatives.

**Factsheet on Dechlorane Plus**

Dechlorane Plus is polychlorinated flame retardant. With the global restriction of brominated flame retardants (FRs) such as deca-BDE, octa-BDE, the use of other FRs like DP has increased. It is preferably used owing to its low cost, low density, and high thermal and photochemical stabilities than the other brominated flame retardants. DP does not occur naturally and is released to the environment most likely through manufacturing, formulation and/or industrial usages. It has been detected in groundwater and lakes at certain sites. Considering the characteristics of persistence, biomagnification and bioaccumulation Dechlorane plus is under consideration in the Stockholm Convention. In this context, this factsheet provides essential information about Dechlorane plus (compound proposed as POP at the Stockholm Convention) such as, chemistry, applications, production and trade, health impacts and regulations.

**Factsheet on UV-328: A Potential Persistent Organic pollutant**

UV-328 is a high-volume additive typically used as a ultra-violet (UV) stabiliser in plastic products, some personal care products, rubber and coatings. UV-328 has been found in the environment and biota, far from its production and use, including in remote areas of Arctic and the Pacific Ocean. UV-328 has been found to be transported with, and may subsequently be released from plastic debris. They may then be taken up seabirds with subsequent accumulation in their tissue, and microplastics. It is also the first non-halogenated chemical considered by the Persistent Organic Pollutants (POPs) Review Committee of the Stockholm Convention. In this context, this factsheet provides essential information about UV-328 (compound proposed as POP at the Stockholm Convention) such as, chemistry, applications, production and trade, health impacts and regulations.

**Factsheet: Antibiotics in Agriculture: A Potential Source of Antimicrobial Resistance**

This factsheet highlights antibiotics extensively used in agriculture to prevent and cure various diseases in crops. The factsheet emphasises the issues and concerns related to antibiotic use in agriculture and the potential risk of antimicrobial resistance. Further, it briefly describes the regulatory status of antibiotics used in agriculture globally and in India.

1. **Lions Clubs International Deploys 300,000 Club Members To Solve The Challenges Of E-Waste In India**

Lions Clubs International today announced that it has deployed close to 10,000 Clubs in the country which will involve close to 300,000 volunteers/members to resolve challenges of faced e-waste in the country. Used phones, batteries, laptops and other electronic items lying in our homes are part of what constitutes e-waste and are harmful if not disposed of properly owing to their hazardous material content. This is an emerging global environmental and public health issue as it further depletes our natural resources, adding to land, air and water pollution. We are exposed to serious health problems from these e-wastes ranging from skin diseases to headaches, gastritis & ulcers. Children have the most harmful impacts their bodies are still developing and they are the most vulnerable population. According to a Central Pollution Control Board report, in the financial year 2019-2020, India generated 1.04 lakh tonnes of e-waste from 21 types of electronic and electric e-waste. Globally, the Lions Club International is deploying close to 1.4 million volunteers in more than 200 countries who are dedicated to working to dispose off e-waste.


Source: India Education Diary, Mumbai, Dec 26, 2022

2. **Plastic pollution: Birds all over the world are living in our rubbish**

Birds from every continent except Antarctica have been photographed nesting or tangled in our rubbish. Photos were submitted by people from all over the world to an online project called Birds and Debris. The scientists running the project say they see birds ensnared - or nesting - in everything from rope and fishing line to balloon ribbon and a flip-flop. Nearly a quarter of the photographs show birds nesting or entangled in disposable face masks. The focus of the project is on capturing the impact of waste - particularly plastic pollution - on the avian world. “Basically, if a bird builds a nest using long fibrous materials
- like seaweed, branches or reeds - the chances are it will have human debris in its nest somewhere,” said Dr Alex Bond from the Natural History Museum in London, and one of the researchers involved.

Source: BBC News, Sep 04, 2022

3. NCC, UNEP sign MoU to tackle plastic pollution

The National Cadet Corps (NCC) and United Nations Environment Programme (UNEP) on Thursday signed a Memorandum of Understanding (MoU) to tackle the issue of plastic pollution and achieve the universal goal of clean water bodies through ‘Puneet Sagar Abhiyan’ and ‘Tide Turners Plastic Challenge programme’. The MoU was signed between Director-General NCC Lt. Gen. Gurbirpal Singh and Resident Representative, UN World Food Programme Bishow Parajuli in the presence of Defence Minister Rajnath Singh.

Source: The Hindu, New Delhi, Sept 23, 2022

4. Govt Notifies Battery Waste Management Rules, 2022 To Boost Battery Recycling

- Besides EV batteries, the new rules also cover portable batteries, automotive batteries, and industrial batteries
- Under the new rules, the producers, including battery importers, will be responsible for collection and recycling or refurbishment of waste batteries
- The new Battery Waste Management Rules, 2022 will replace the Batteries (Management and Handling) Rules, 2001

The Indian government has notified the Battery Waste Management Rules, 2022 to ensure eco-friendly management of waste batteries in the country. The development comes in the wake of an increasing push for the adoption and production of electric vehicles (EVs). The EV industry is set to become one of the largest producers of waste batteries in the coming years. Besides EV batteries, the new rules also cover portable batteries, automotive batteries, and industrial batteries, a statement from the Ministry of Environment, Forest & Climate Change said.

Source: Inc 4, Aug 27, 2022

5. 76 fire calls from Delhi’s three landfill in four years, DFS recommends underground water tanks, pumps at sites

There have been 76 fire calls from the three landfill sites in Delhi in four years, according to data submitted by the Delhi Fire Services to a joint committee constituted by the National Green Tribunal (NGT) earlier this year to suggest further course of action for the Ghazipur landfill. The Bhalswa and Ghazipur landfills have seen three fire calls each till April 30 this year, while there were two such calls from the landfill at Tughlaqabad. There were 12 such fire calls from Bhalswa and four from Ghazipur last year. These fires are mostly seen in the summer and tend to last for days. The DFS report notes that fires deep below the landfill surface involve materials that are months or years old, and that they are more difficult to extinguish than surface fires. It recommends setting up underground water tanks and pumps at these landfill sites.

Source: Indian Express, New Delhi, Aug 02, 2022

6. Delhi: Industrial effluents behind Yamuna’s heavy metal woes

The sources of toxic heavy metals in the Yamuna in Delhi region are primarily of anthropogenic origin, according to a new study conducted by The Energy Resources Institute (TERI). The study, which is based on an analysis of Yamuna water samples collected during the first Covid-19 lockdown, says that as industries were closed during that period, the concentration of toxic heavy metals, such as chromium, nickel, copper, zinc, cadmium and lead, were seen to be below the detection limit.

Source: Times of India, New Delhi, Aug 02, 2022

7. Delhi govt plans studies on frothing in Yamuna microplastics in groundwater

The Delhi government will conduct studies to identify pollution hotspots responsible for frothing in the Yamuna and ascertain the concentration of microplastics in the river and groundwater in the capital, officials said. It also plans to conduct a study to find out potential barriers to the elimination of single-use plastic items. The Environment Department will engage institutions of repute working in the domain to conduct the three studies which are expected to be completed within six months from the date of assignment of the project. One of the studies will ascertain the sources and reasons behind the froth on the river surface which reflects the “deadness of the water and nil dissolved oxygen in it”.

https://www.theweek.in/wire-updates/nation/2022/07/26/des70-di-env-studies.html
Source: The Week, July 26, 2022

8. Govt’s plastic straw ban to curb pollution leaves Indian consumers thirsty

Indian Prime Minister Narendra Modi has a reputation for imposing policies suddenly on an unprepared nation, but when he pledged in 2019 to eliminate single-use plastics, food and beverage makers had years to prepare. When the first tranche of items was banned this month, they weren’t ready. Plastic straws are attached to many of the ubiquitous Tetra Paks of juices and other beverages sold in the country. With 19 single-use plastic items banned from July 1, including the straws, companies including Dabur India Ltd. and Parle Agro Pvt., one of the nation’s largest beverage makers, have been racing to replace them with imported paper versions. Vendors say the change has created a shortage and some stocks of soft drinks boxes have run out.

Source: Business Standard, July 20, 2022
9. Indian plastic waste management rules to tackle crisis

The Indian Union environment ministry has issued the Plastic Waste Management (Second Amendment) Rules, 2022, in view of the phasing out of certain single-use plastic products from July 1 and the mandate to increase the thickness of plastic carry bags to over 120 microns from December 31. The rules specify what biodegradable plastics are and provide a statutory framework for their use as an alternative material. They provide for levying of penalties or environmental compensation under the ‘Polluter Pays’ principle on those who do not comply with the rules. The amended rules were issued on July 6 and updated on the ministry’s website on Wednesday. They say biodegradable plastics mean plastics other than compostable plastics, which undergo degradation by biological processes under ambient environment (terrestrial or in water) conditions.


Source: Gulf Today, July 18, 2022

10. India to Get Its First e-Waste Eco Park

Delhi environment minister Gopal Rai held talks with officials of the environment department and Delhi Pollution Control Committee regarding the construction of an e-waste eco-park in New Delhi. India's first e-waste eco-park will be set up in Holambi Kalan in Delhi in an area of about 21 acres. An 11-member committee has been formed to look into the modalities of setting up such a place. The committee will appoint an agency pretty soon, and the Park will be ready in about 23 months. For the universe, Delhi produces over two lakh tonnes of e-waste every year, or about 9.5 percent of the total amount produced in India. It has to be noted that five percent of the generated e-waste is properly recycled.

Source: Mirchi9.com, 8 July 2022

11. Delhi: Bhalswa fire releases toxic chemicals; locals demand landfill removal

Locals residing near Delhi’s Bhalswa landfill site said they are facing breathing issues and have demanded a permanent solution to the frequent fires, which often rage for days at a stretch. Yesterday, the Bhalswa landfill site caught fire in the afternoon and since today, plumes of smoke have continued to emanate from the site. Earlier in April, dense plumes of smoke kept billowing out from the site after a fire broke out on April 26 and firefighters battled to douse the flames for six consecutive days. “I have been living here for the last 20 years and have been seeing this from that time. No changes happened in this landfill. We are facing many problems like breathing and coughing, etc. We want a permanent solution for this,” a local resident said.

Source: The Mint, New Delhi, June 04, 2022

12. 75% of river monitoring stations report heavy metal pollution: Centre for Science and Environment

Three out of every four river monitoring stations in India posted alarming levels of heavy toxic metals such as lead, iron, nickel, cadmium, arsenic, chromium and copper. In about a fourth of the monitoring stations, which are spread across 117 rivers and tributaries, high levels of two or more toxic metals were reported Of the 33 monitoring stations in Ganga, 10 had high levels of contaminants. The river, which is the focus of the Centre’s Namami Gange mission, has high levels of lead, iron, nickel, cadmium and arsenic, according to the State of Environment Report 2022 from the environmental NGO, the Centre for Science and Environment (CSE). The report is an annual compendium of environment-development data and is derived from public sources.

Source: The Hindu, New Delhi, June 05, 2022


On World Environment Day, a new report has revealed alarming facts about where India stands amid the rising global threat of climate change. After blistering in heatwave conditions for the past three months, there is more bad news in store. Five states and two union territories are under threat from a rise in water spread. Over a third of India’s coastline witnessed some degree of erosion between 1990 and 2018. Three out of every four river-monitoring stations in the country have recorded alarming levels of heavy toxic metals. The entire forest cover of the country is likely to become a climate hotspot. India recycled 12 per cent and burnt 20 per cent of the 3.5 million tonnes of plastic waste it generated in 2019-20.

Source: New18, New Delhi, June 06, 2022
A GLIMPSE OF THE EVENTS

A workshop on “Towards Zero Waste: Circular Economy (CE) in Waste Management” at India Habitat Centre

A campaign on “World Antimicrobial Awareness Week 2022”

Launch of the book – “Samtal Jameer, Samtal Jameen” – A multispecies project

An Environmental film festival, “Quotes from the Earth,” at India International Centre

A workshop on Transitioning to Circular Economy in Electronic and Electrical Equipment (EEE) at Jaypee Vasant Continental

A Public Lecture on “Microplastics, an Invisible Threat to our Ecosystems” at India International Centre
ABOUT TOXICS DISPATCH

Toxics Dispatch was started in 1998 with a primary objective to create awareness about toxic pollution in our environment related to the management of waste and hazardous chemicals and their impact on the environment and public health.

Toxics Dispatch was born out of the need to reach out to various stakeholders, including government officials, judiciary, youth, and the general public, to sensitize them about the extent of toxic pollutants and their damaging effects on the environment.

Since its inception, Toxics Dispatch has highlighted pressing issues of hazardous, biomedical, municipal solid waste, e-waste, international waste trade, and the emerging issues of pesticides and Persistent Organic Pollutants (POPs). The newsletter aims to disseminate information to help strengthen the campaigns against toxic pollution, provide cleaner alternatives and bring together groups and people affected by this menace.

Toxics Dispatch comes out thrice a year and is available online and in print. You can subscribe to it by writing to info@toxicslink.org.

PHASING OUT BPA!

It’s almost impossible to find a product that does not have synthetic chemical added into it, and one of them is the commonly used baby feeding bottle containing the chemical BPA in it. BPA or Bisphenol-A found in baby feeding bottles play the role of Endocrine Disruptive Chemicals (EDCs) that are capable of harming infants and newborn babies. Many countries have banned it as a precautionary measure. Toxics Link has been campaigning against the chemical and released a lab tested report titled “Bottles can Be Toxic” that received considerable attention from all stakeholders including the media. The report was also discussed during winter session of the Indian Parliament. Currently, we are having dialogues with Bureau of Indian Standards to completely phase out BPA from India. Join us in our campaign against BPA.

TOXICS LINK LIBRARY—A TREASURE HOUSE OF KNOWLEDGE

The library of Toxics Link houses a variety of books, magazines and reports which are well-stocked, classified and indexed, for the benefit of the readers. One can also get the entire collection of around 520 documentary films from around the world on various issues concerning environment. It has over 4900 books and research based reports; and new books, magazines and periodicals are added from time to time. One can also find media coverage on environment that are updated on a regular basis. Besides, the library also has stock of parliament questions that are raised on the research based studies on environment done by Toxics Link. The readers can find all the studies done by Toxics Link on its website.

TOXICS ALERT (E-NEWS)

An environment news bulletin

Visit: http://enews.toxicslink.org/, for our monthly e-newsletter on environment related news, articles, policy interventions, events on toxicity and its management. You can also subscribe to receive its update via e-mail.

STAY CONNECTED

For more information materials, invitations and updates on environmental issues please write to us at info@toxicslink.org

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