



Envisioning Sustainable Waste Management Pathways for the Indian Himalayan Region

11 - 12 MAY
2018 GANGTOK, SIKKIM



BACKGROUND

The Gangtok workshop on waste "Envisioning Sustainable Waste Management Pathways for the Indian Himalayan Region" was organised on May 11 -12, 2018 in response to the call of Beat Plastic Pollution - theme for World Environment Day (WED), 5 June 2018. The choice of the theme was a great recognition of the plastic waste problem, especially that of single use plastic, and was a call for governments, industries, NGOs, communities, and individuals to come together and urgently reduce the production and excessive use of single-use plastic polluting our environment, and threatening human health, and to move towards sustainable alternatives.

For the Integrated Mountain Initiative (IMI) which has been a strong voice on the Sustainable Mountain Cities discourse, the issue of waste management is of great relevance and the WED theme this year provided the opportunity to expand the mountain cities dialogue further. Together with the Zero Waste Himalaya group, the Gangtok Workshop Waste was hosted by the IMI Sikkim State chapter and the Darjeeling Himalaya Initiative with Zero Waste Himalaya.

IMI and Zero Waste Himalaya collaborated with Rural Management and Development Department, Government of Sikkim to organise the workshop, with support from the Sikkim Pollution Control Board, WWF – India, Swiss Development Cooperation (SDC IHCAP) and Food and Agriculture Organisation (FAO), bringing together a host of experts, practitioners, policy makers and individuals working on waste in the mountains.

**BEAT
PLASTIC
POLLUTION**



**WORLD
ENVIRONMENT
DAY**

OBJECTIVES

The two day workshop in Gangtok with representatives of the 12 mountain states was organised with the following objectives –

- Understanding mountain stories on existing best practices on waste
- Enhance knowledge and sharing on National and State waste policies and to contextualise it for the mountains and identify gaps and challenges.
- Develop a plan for the Clean Himalaya Campaign at the state /regional level with focus on single use disposable plastics.
- Generate ideas for the WED workshop in Delhi
- Identify areas of work and intervention beyond WED for each state

Apart from these, an overarching objective of the workshop was also to broaden the network of Zero Waste Practitioners and Promoters in the IHR, and to generate a vision for sustainable waste management for the Indian Himalayan Region (IHR).

PARTICIPANTS

The workshop had the participation of around 120 representatives from all across the 12 Himalayan mountain states. The states were represented by a good mix of elected representatives, government officials from Swachh Bharat Missions as well as Urban and Rural Local Bodies, NGO workers, Academics and individuals. The host state of Sikkim had participants from Rural Management and Development Department, local NGOs, Schools, and interested individuals.



WORKSHOP PROCEEDINGS

Welcome and Introduction

The welcome address was delivered by Shri. Anil Raj Rai, Special Secretary, Rural Management and Development Department, Government of Sikkim.

Address by Guest of Honour, Mr. Shakti Singh Chaudhary, Honble Mayor, Gangtok

Honorable Mayor, addressed the gathering of the mountain states emphasising the importance of working on waste, and eradication of single use plastics. He apprised the participants of the various initiatives of the Sikkim Government and the Gangtok Municipal Council, highlighting the segregation at source which the GMC had recently initiated for Gangtok.

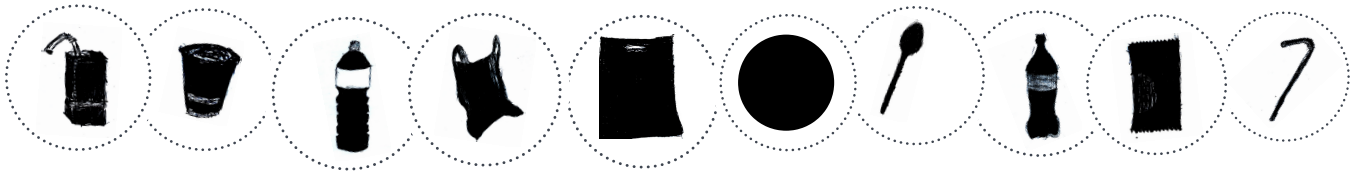
Address by Chief Guest, Mr. Samsher Rai Zilla Adhyaksha, East District, Sikkim



Mr. Samsher Rai appreciated the efforts of the organisers in bringing together the representatives of the 12 mountain states to talk about the important issue of waste management in the Himalayan region. Waste was an critical issue that posed a real challenge to the mountain areas, and one that needed concerted efforts of all stakeholders in bringing awareness among the common public.

Session 1

What's the deal with plastics!



RP GURUNG
PRIYA SHRESTHA
ZERO WASTE HIMALAYA

The session 'Whats the deal with Plastics!' had the objective of bringing all participants to a common understanding on the extent and scale of plastic pollution globally, and the urgency of the problem, which led to the theme of World Environment Day to be centered on beating plastic pollution. The session was also to provide clarity on the different types of plastics in use, their recyclability and harmfulness.

Mr. Rajendra Gurung provided the participants with statistics on the recent report on 'Production, use and fate of all plastics ever made' by Roland Geyer, Jenna R. Jambeck and Kara Lavender Law. The report states that in the last ten years the world has produced more plastic than during the whole of the last century. Approximately, a total of 8.3 billion metric tons of plastics have been produced overall of which a shocking 6.3 billion tons has been trashed and are lying somewhere on the planet either in landfills or the oceans.

A million plastic bottles are bought around the world every minute.

Annually approximately 500 billion plastic bags are used worldwide. More than one million bags are used every minute.

By 2050, there will be more plastic by weight than fish in the ocean.

More than 250,000 tons of plastic—that's 5.5 trillion pieces—have already accumulated in the world's oceans.

There will be 12 billion metric tons of plastic in landfills.

The recent story from 'The Guardian' of micro plastic found in remote Swiss Alps forest was highlighted as to how pervasive plastic pollution has become. The findings that many popular branded bottled water across 19 countries including India containing micro-plastic was another example cited.

Only a miniscule 9 % of plastics have been recycled. Another alarming concern on plastic usage that was raised is that, 50% of all plastic produced is single use plastic items, meaning that the plastic is trashed immediately after it is used only once.

The report also indicates that at least 8 million tonnes of plastics leak into the ocean each year which is equivalent to dumping the contents of one garbage truck into the ocean per minute. If no action is taken, this will increase to two per minute by 2030 and four per minute by 2050. The presentation highlighted the urgent need for individual action supported by larger policy level shifts to rethink on plastic use.



Session 2

What are we doing with our waste?

Current policies and waste management practices

For this session, the participants went into state wise groups to discuss on the existing waste policies of the respective states and also on the current practices employed for managing waste in their own areas. The discussions in each of the state groups were very engaging, as the participants of each state were a mixed group of government and non government organisations. The discussion points were presented in the plenary. The summary of all the state presentations gave the following insights

- No mountain state had an overall policy for waste management that had been drafted.
- Proper waste management practices were lacking in most states, but some places like Leh had efficient systems of collection and transport for some urban centers.
- Steep mountainous terrain and scattered houses posed serious challenges of collection
- Segregation at source had been initiated in some states but was limited only to certain urban pockets.
- Burning of waste was widely practiced and prevalent across the mountain states.

Session 3

Navigating the Waste Management Policy scapes

HARSHAD BARDE
KKKPK/ SWACHH

Mr. Harshad Barde's presentation on the Solid Waste Management Rules and Plastic Waste Management Rules of 2016 provided key insights into the various provisions of the rules and also an analysis into their drawbacks and weaknesses. The earlier Municipal Solid Waste Management Rules, 2000 that existed prior to the drafting of the 2016 rules were also presented to provide some background on the change that had occurred on the policy front.

It was mentioned that the 2000 rules focused only on municipal areas while leaving a large chunk of area uncovered. It also had more focus on prohibition of littering, and segregation of waste was only encouraged but not mandated by the rules. Overall, the MSW Rules of 2000 was stated to be vague, incomplete, non-enforceable, with narrow applicability and no penalties.





Compared to the earlier rules, the new SWM Rules and PWM Rules of 2016 were all encompassing and was applicable beyond ULBs to Urban Agglomerations, Census Towns (Panchayats), Industrial Townships, Railways, Defence Establishments (Cantonments), SEZ, Government Organisations, Places of religious / historical importance etc.; and to every Domestic, Institutional, Commercial and any other non-residential solid waste generator in these areas. The rules also had strong emphasis on decentralized waste management and there was mandatory segregation into three categories (Wet, Dry (including Sanitary) and Domestic Hazardous).

The positive features of the rules were recognition and integration of waste-pickers, door to door collection, user fees, spot fines, provision for bye-laws and city plans. The new rules also gave strong emphasis on waste reduction, reuse, recycling, recovery and optimum utilization and sought to recognize and integrate informal waste-pickers.

Mr. Barde's presentation also highlighted the meaning of Extended Producer Responsibility, a concept that was new to many participants, stating that EPR was not only about the companies being responsible for the waste they generated, but to holistically look at the entire production system. He gave specific insights into how EPR could be implemented, despite the many drawbacks, vis a vis the Solid Waste Management and Plastic Waste Management Rules of 2016.

An important learning for the mountains states was that every state was to work on a Policy and Strategy on SWM in consultation with stakeholders including representatives of waste-pickers within a year of rules being framed.

Session 4

Overcoming the challenges - Stories of Change

SWABHAW GURUNG The Stories of Change session was planned with the objective to talk and share about positive stories around waste that were ongoing in the different states, and to explore possibilities of replicating these initiatives across the different states.

LAK TSHEDEN THEENGH,

HARSHAD BARDE

From a policy perspective, Sikkim presented on the various policy initiatives that the state had worked to reduce and manage their waste. The presentation was made by Mr. Swabhaw Gurung from Rural Management and Development Department who charted the course that Sikkim had taken since the first plastic bag ban in 1998. The government notification of not using bottled water in Government functions and the ban on styrofoam utensils were mentioned, along with the state's efforts to reduce open defecation in the state. He highlighted also the various initiatives undertaken under the Swachh Bharat Mission of the state.

A story of positive community action was shared about Lachen, a remote village in North Sikkim, that had successfully banned visitors from bringing packaged drinking water in the village, by Lak Tsheden Theengh of WWF- India. A cleanliness drive that was organised in 2011 by the Lachen Dzumsa (the traditional village council) with Lachen Tourism Development Committee showed that a large amount of plastic bottles were littering the fragile high altitude landscape, which was being used only by the tourists visiting the area. The Lachen Dzumsa then immediately decided to ban the use and sale of bottled water in the village and restricted tourists and taxi drivers from carrying it into the area. A potability test for the tap water of the village by a reputed lab was conducted to assure the visitors of the safety of drinking water provided. Water filters were also set up in hotels and shops to further provide safe water in hotels and shops.



An urban story on successful waste management initiative was shared of SWaCHH's experience of working with waste and waste workers in Pune. Mr. Harshad Barde made this presentation which provided participants with some great insights into how an overall waste management plan could be developed, one that also integrated the informal sectors of waste workers and ragpickers. Swachh had mobilised more than 3000 ragpickers as door to door collectors of segregated waste from a municipality in Pune, who serviced more than 1 lakh households in the ward. The segregated waste collected by the collectors were then treated further. The red dot campaign to make citizens aware on segregating the sanitary waste separately was also an interesting initiative to learn for the participants.

Session 5

Zero Waste Concept and Principles. Food and Waste

ROSHAN RAI The question of what happens to stuff once its use is over and where does waste go was the opening discussion space for the zero waste concept and principles session. "There is no such thing as away, whenever we throw something away, it has to go somewhere' quote by Annie Leonard, was the premise to redefine 'swachh and go beyond the clean-up drives'.

ZERO WASTE HIMALAYA

DLR-PRERNA

The need to look at waste or stuff in a comprehensive manner was presented where linear systems that have externalised costs have resulted in the existing challenges of waste pileups. Moving into cyclic systems and closed loop economies is the zero waste way where there is no waste produced for us to deal with.

Zero waste is also about ethical systems where worker rights and dignities are integral to the processes besides ensuring that it is the most efficient and economic use of the resource. The importance of reduction of waste was highlighted, refusing to create waste and the limits to recycling analysed and need for mindful consumption was presented as individual actions possible.

Segregation at source and composting as reduction of waste load and recycling nutrients was presented. Burning of waste in any form is not a solution was stressed. At institutional and systems level, primary segregation, door to door collection and treatment is needed to ensure individual efforts are complemented .



Food and Waste The importance of food cultures was presented in the context of the silent agro-biodiversity loss in the past 100 years as well as changing lifestyles in terms of increased urbanisation; reduced physical activities; increased packaged food consumption and extreme media influences on lifestyles and consumption patterns.

The concepts of food miles and embodied energy was discussed. With this background note, increased refined sugar consumption and its resultant health issues of dental problems, obesity, diabetes, allergies and cravings was presented with FDA recommendations of 12.5 teaspoons or 50 g sugar per day for an adult and half of it for children.



Sugar and 'Hidden sugars(sucrose, maltose, high fructose corn syrup, etc.)' in popular juices, drinks and snacks were analysed and showed how it exceeds FDA recommendations to the point that a 200 or 250 ml drink contained half or more recommended daily allowance of sugar for an adult.

Likewise some popular biscuits contained 23% sugar even though it was promoted to be healthy biscuit. FDA recommendation of salt to be 2300mg per day and 1500mg for certain groups or 1 tablespoon per day was presented with health implications of hypertension including signs of pre-hypertension among children. 'Some foods that don't taste salty can still be high in sodium, which is why using taste alone is not an accurate way to judge a food's sodium content' was highlighted with some popular snacks like instant noodles, chips and bhujias and the lack of awareness of their salt and nutritional content.



Names of these popular eatables like 'real, natural, high fibre, digestive, atta, herbal' etc. was analysed in terms of how it promotes the notion of healthy. These notions are further promoted in popular media and there is lack of consumer action and awareness on the health implications and media control in the promotion of these junk food. The design choices for packaging, ensure that it is trashed as soon as it consumed. MLPs have no solution as of now. Tetrapaks are partially recyclable but accessing services is difficult and PET recyclable but collection an issue. Thus, the issue poor nutritional quality food, junk food, but also contributing a huge pile of waste after consumption.

Thus, there is not only the issue of poor nutritional quality food, junk food, but also the contribution to a huge pile of waste after consumption. Promotion of healthy food cultures of millets, naked barley, indigenous varieties of bananas and the fermentation culture of Eastern Himalaya like of soyabean would be conservation of food, identity, culture and reduction of waste.

Kerala imposes 14.5 per cent fat tax on branded restaurants selling junk food - 2016;
Punjab, Nagaland bans sale of junk food in schools - 2016/17;
CBSE lists detailed measures to limit junk food in schools - 2016'.



Session 6

Entrepreneurship opportunities around waste

MR. DEBARATHA BANERJEE,
SAMPURNA EARTH
ENVIRONMENTAL SOLUTIONS
LTD

Mr. Banerjee presented that lifestyle choices are key to reducing waste, which is a personal commitment. But personal commitments will take a while to manage the historical waste as well as the large amount of waste that is being generated. He went on to give the example of the landfill at Mumbai which is growing in size so rapidly that it is now threatening take off and landings of aircrafts thus there is a need to address this mountain of waste immediately.

He explained how this can be looked at from an entrepreneurship possibilities through the provision of knowledge, services and technology. He presented a variety of composting bins of different sizes and composting processes which could be adopted at a household level, community, neighbourhood level or a city level. Various bio-gas units that can be used for bio-methanation possibilities was presented as an option to manage bio-degradable waste.

Plastic roads made of with bitumen mixed with waste plastics, was also discussed but he advised caution about promoting the technology, as the toxicity of plastic would be brought next to soil with possibilities of leaching. He was of the opinion that the historical and present day plastic waste could be used to fire cement kilns which would result in burning of plastic waste with least toxicity due to the high temperature in the kilns.

Session 7

The Himalayan Cleanup:

PRIVADARSHINEE SHRESTHA
ZERO WASTE HIMALAYA
WWF- INDIA

With the announcement of the World Environment Day with theme 'Beat Plastic Pollution' and India being the global host; Zero Waste Himalaya, a pan Himalayan platform of Bhutan, Nepal and India, felt that it was an opportune moment to stack up a cleanup event that would bring the entire Indian Himalayan Region together to address the issue of waste.

Along with Global Alliance against Incineration the cleanup would conduct a waste and brand audit so as to give the much needed picture of the composition, volume and brands that trash the Himalaya. It was an attempt to push beyond the narrative of the clean and sacred Himalaya and bring to the forefront the fast increasing issue of waste. It was decided that 26 May would be the cleanup date so that the waste and brand audit data could be shared on 5 June, World Environment Day.

The Cleanup would also be a process of learning for the participants with proper planning to ensure no additional plastic waste is generated in the event by bringing non- packaged food, water in reusable bottles and creating linkages with recyclers so as to reduce the amount of waste that would be trashed is kept at a minimum from the cleanup. Planning and preparation would be key to ensure that the Himalayan Cleanup is a zero waste event. The site for the cleanup would be 'a representative or popular location as well as the immediate neighbourhood of an institution'. A communication strategy would be key to expand the reach of the cleanup.





Waste and Brand Audit

The rationale for waste audit and brand audit was presented as a tool for understanding the waste profile for better management as well as demanding extending producer responsibilities. Segregation during cleanup would be the key step for the audits. The waste audit would use volume, weight and numbers as indicators and they were standardised for the IHR by the house to ensure uniformity of data.

The brand audit would follow the system that ZWH learnt from GAIA as the brand audit would be part of a larger global brand audit including an Indian one across a number of cities and the IHR. A minimum of 10%, random selection, of the waste collected would be brand audited. A list of different items of plastic waste to be brand audited was presented along with a case study of Sikkim Government College where a brand audit had been undertaken to the house..

The waste and brand audit data would be used at the local level to leverage improved waste management services as well as advocate for extended producer responsibility. The Himalayan Cleanup Data would be presented at the national level at the Himalayan Ecosystems and Services workshop during the World Environment Day observance organised by the MoEFCC(1 to 5 June) as well with GAIA which would be specifically the brand audit data to demand for corporates taking responsibility of their plastic waste.

The house discussed at length on the cleanup, waste and brand audits. There was general consensus from the house about facilitating the cleanup across the IHR. There was lively debate on the waste and brand audit as most of the members of the house was undertaking this for the first time.

Session 8

Waste Warriors: Sharing of cleanup experiences

NAVEEN SADANA
SHUBHAM CHIKARA
WASTE WARRIORS

To present an idea on how cleanups could be organised in a more systematic manner and with the involvement of various groups and volunteers, the activities of Waste Warriors from across the Western Himalaya was presented. This provided information about the Waste Warriors organisation from its inception, various cleanup drives as well as the awareness and education campaigns, in educational institutions and communities. Their segregation process and linkages to recycling was very insightful in terms of how educational institutions were involved. They also presented the waste and brand audits they had done in the past which was useful for planning for the Himalayan Cleanup.

The functioning of Waste Warriors was grounded on the concept of volunteerism, and a large part of the organisation's activities were implemented by the active involvement of volunteers who came from far and wide to be part of the various cleanups and awareness activities.

Waste Warriors had initially been established to clean up littered spots in Himachal Pradesh, but had since then spread to Uttarakhand and they were actively working for maintaining the waste situation in Jim Corbett National Park.



Session 9

Zero Waste Campaign Ideas

ROSHAN RAI
ZERO WASTE HIMALAYA
DLR-PRERNA

Some global and local campaigns that ZWH has been part of, were shared from the perspective that clean-ups are a great place to start off with, but a bad place to stop. It was mentioned that it would be necessary to build up more initiatives after the cleanup so as to add to the movement further through World Environment Day and continue to 'Beat Plastic Pollution'.

The key days that were cited were: International Straw free Day – 3 February and International Plastic Bag Free Day – 3 July which enables an international focus of a single use item, as well as focussing on local action. Examples of ZWH interventions and how some restaurants in Gangtok have gone plastic straw free was cited. Also, the highlighting of the limitations of the plastic bag ban, how non woven PP bags have entered the market and the advocacy in Sikkim was shared.

The Plastic Freedom Challenge – 8 to 15 August that is observed in Sikkim and Darjeeling by the ZWH was shared. The dates were chosen as 8 August is ZWH foundation day and 15 August is being leveraged as independence from plastics.

The Plastic Freedom Challenge started in 2016 is a call to action with these possibilities of action:

- 1 Stop the use of plastic bags and PP bags. Always carry your own bag. Do not offer a plastic bag. Carry your own water bottle and get it refilled.
- 2 Do not use plastic / Styrofoam / thermocol, plates,
- 3 Refuse Plastic Straws and plastic cup covers. You can do without these. Offer reusable or Use washable reusable options
- 4 Never buy bottled water. Offer boiled and filtered water. cups, spoons.
- 5 Stop using products with microbeads.
- 6 Stop buying products packaged in multilayered plastic. Buy local and eat healthy. Offer loose and in bulk biodegradable.



The stories of past challenges were shared with the participants, such as institutions going junk food free, stocking non-packaged food in the canteen, shifting to refillable ink pens, growing and cooking food, etc.

The presentation ended with questions and thoughts of reaching to individuals, bringing in the non converted and then expanding to communities locally and globally. The need for communication strategies was highlighted.

Session 10

Beating Plastic Pollution - A Vision for the mountain states

The last session of the 2 days workshop was the most important with the 12 participating states working in groups to discuss on the way forward and to plan for the Himalayan Cleanup, which were presented in the plenary.

In their presentations, participants expressed how the 2 days workshop on waste had provided them with some great ideas to take back to their states and initiate at their own level. All 12 states representatives planned on the taking the Himalayan Cleanup forward in their own areas through the support of their Governments, civil society organisations, local bodies, schools and colleges.

Most of the states planned on organising awareness events, lobbying with their respective governments/ ULBs on ban of single use items, promoting segregation of waste, demanding for city bye laws, etc.

The consolidated points from the workshop are summed up as

- Develop local and regional policies
- Demand extended producer responsibilities
- Promote segregation of waste at source and focused awareness on it.
- No to single use plastic
- Reduce the use of multi-layered plastic
- Link with state visions and sustainable development goals
- Make a zero waste alliance for mountain states



Session 11

Summing up

PD RAI In his summary address Shri P D Rai, Honourable MP of Sikkim highlighted the need for individual action to 'Beat Plastic Pollution' and shared his personal experiences in going zero waste in his family and workplace. He also highlighted the green protocol that was followed by the state government of Sikkim.

MP - LOK SABHA
SIKKIM

Mr. Rai also apprised the participants on the Well Being of Generations Bill that had been drafted by the Sikkim Government to integrate the sustainable development goals into the state's planning process. He mentioned that this Bill would be a crucial milestone in setting Sikkim's development pathway.

Mr. Rai mentioned that the Himalayan Cleanup was an excellent initiative and lauded the efforts of the organisers as well as all the agencies who made it possible. The waste and brand audits being planned as part of the clean up would be instrumental to look at the waste issue from a mountain perspective, and the revelations from the clean up had to be used for improving local interventions, as well as to elevate the issue of extended producer responsibility from the brand audits up to the level of the Parliament.



Acknowledgement

Integrated Mountain Initiative and Zero Waste Himalaya gratefully acknowledges the support of Rural Management and Development Department, Government of Sikkim to organise the Gangtok workshop on waste.

We also express our sincere gratitude for the support provided by WWF – India, Swiss Development Cooperation (SDC- IHCAP) and Food and Agriculture Organisation (FAO) for the Gangtok Workshop as part of World Environment Day, 2018. We are also highly grateful to the State Pollution Control Board, Government of Sikkim for their gracious support to make this workshop possible.

We thank all the experts, practitioners, policy makers and individuals working on waste who believed in this idea of the mountains coming together to talk about waste.


Thank you for your passion, dedication and enthusiasm.

Our Mountains deserve better MAY 26

THE HIMALAYAN CLEANUP

A JOURNEY TOWARDS ZERO WASTE!


At an **INDIVIDUAL level, I pledge to understand how my everyday lifestyle matters, and how my actions are contributing to the problem of waste.**



I will reflect on my lifestyle choices and choose to reduce the use of unnecessary plastics in my life.

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At a **COMMUNITY level, we the people of the Indian Himalaya pledge to take strong measures to free our mountains from the burden of plastic waste.**



We pledge to beat plastic pollution by eradicating single use plastics from everyday use and evolving sustainable waste management strategies and practices.

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As **MOUNTAIN PEOPLE, we demand for policies that support design systems which are circular in nature.**





Having made these changes in our personal lives, we will strive to influence our families, friends and peers.

We strongly advocate for polluting companies to be responsible for the plastic trash they are leaving behind in our mountains.

We remain deeply connected and forever **PROUD OF OUR MOUNTAINS.**

#BEATPLASTICPOLLUTION



The Himalayan Cleanup

12 Mountain States stand united to
#Beat Plastic Pollution

