

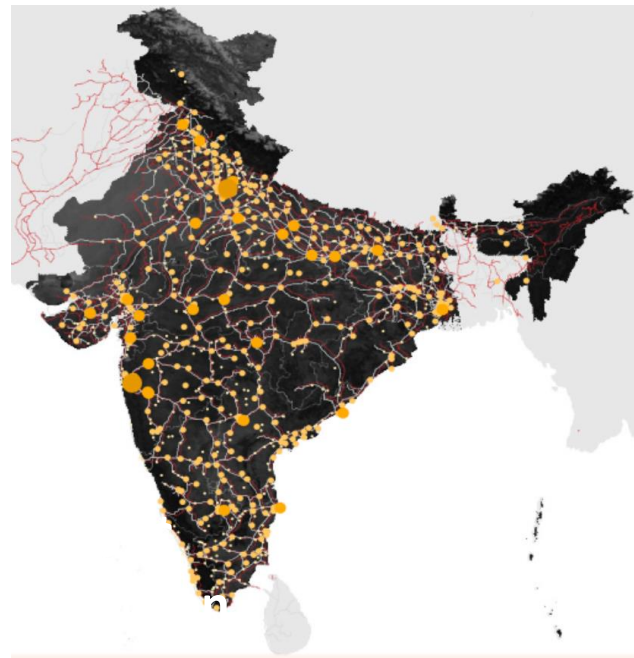
The 10th Environmental Technology Expert Group Meeting

India – Maldives – Sri Lanka

October 29, 2019

第10回環境技術専門家会議 インド・モルジブ・スリランカ

 **UN HABITAT**
FOR A BETTER URBAN FUTURE



KEY FACTS AND FIGURES

- Coastline : 7,516 kms 海岸線
- Population : 1.33 billion persons 人口
- Population in Coastal States/Uts : 560 million persons 沿岸の人口



- India among top ten countries that mismanage plastic waste
- 10 top river systems contribute 90% to marine plastic waste washed into the ocean; of these 3 river systems are in India: Indus, Ganges and Brahmaputra 毎年60万トンのプラごみが海に投棄
- # Plastic dumped into ocean per year : 600,000 tons (2015)
- 7% of India's Municipal Solid Waste is Plastic インドの都市ゴミの7%がプラごみ
- Solid waste from Metro cities : 1,680 to 11,000 tons/day
- Mumbai alone accounts for : 2,200 MLD of waste into costal waters

インドはプラごみ排出国トップ10。世界10大河川が9割のプラごみを海に排出、うち3つの河川(インダス川、ガンジス川、ブラマプトラ川)がインドにある。

OUR OCEANS ARE INUNDATED WITH PLASTIC



- ⬇️ **8mn** metric tonnes of plastic leak into oceans worldwide every year
- ⬇️ **323 mn** tonnes plastic produced in 2015 = 900 Empire state buildings
- ⬇️ **5-13mn** tonnes of plastic entered the marine environment in **2010**
- ⬇️ **\$13 bn** tonnes the cost of the environment damage caused by plastics
- ⬇️ About **60-90 %** of marine litter is made up of plastic -- bags, polymers, fishing gear, food and beverage containers
- ⬇️ **1,200** total affected species and the number is rising

In India, seas near Mumbai, Kerala and the Andaman and Nicobar Islands among the worst polluted in the world





Wake-up call: Indian cities generate 15,000 tonnes of plastic waste daily. A file photo of a drain in New Delhi. | Photo Credit:

PTI

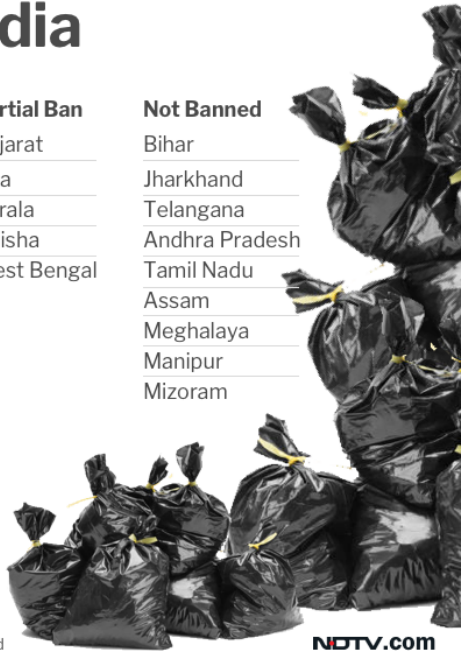
CHALLENGES 課題

- Lack of basic waste collection and municipal waste management
- Prevalence of wide spread illegal dumping
- No financial incentives
- Excessive use of single-use plastic
- Poor awareness among the citizens
- Emerging economic sectors such as e-commerce (amazon, flipkart) exacerbating use of plastic in packaging
- Food delivery aggregators estimated to produce 22,000 tons of plastic per month
- Risks to marine life: 80 short-finned pilot whales stranded in Tuticorin coasts
- Apprx 1 percent of urban population engaged informally in waste recycling

廃棄物の回収システムがない、不法投棄の蔓延、インセンティブがない、使い捨てプラスチックの多用、市民の意識が低い、アマゾンなどネット通販などの拡大でプラと過剰梱包の急増、フードのデリバリーサービスのプラごみ増加、海洋生物へのリスク増大、人口の1%がごみ拾いに従事しているとされる

Plastic Bag Bans Across India

Complete Ban	Partial Ban	Not Banned
Jammu and Kashmir	Gujarat	Bihar
Himachal Pradesh	Goa	Jharkhand
Uttarakhand	Kerala	Telangana
Punjab	Odisha	Andhra Pradesh
Haryana	West Bengal	Tamil Nadu
Rajasthan		Assam
Madhya Pradesh		Meghalaya
Uttar Pradesh		Manipur
Maharashtra		Mizoram
Karnataka		
Chhattisgarh		
Sikkim		
Arunachal Pradesh		
Nagaland		
Tripura		



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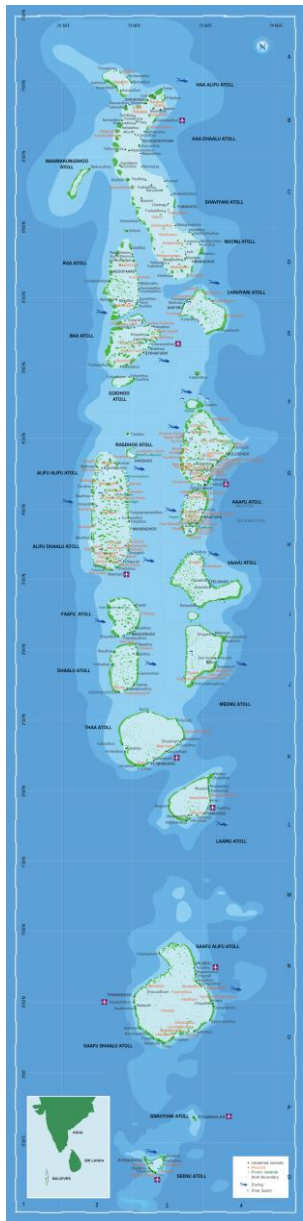
Source: Central Pollution Control Board

POLICIES AND REGULATIONS 政策や規制

- Signatory to UNEPs Clean Sea Campaign
- National ban on single-use plastic: plastic cups, bags, plates, small bottles, straws and sachets, including manufacturing, usage and import of these items
- Estimate that ban on these six items will have 5 to 10% reduction in the 14 million tins of plastic used 使い捨てプラスチックの禁止、(これによってプラスチックの5-10%削減できる予定)、2020年よりマイク
- Ban on micro-beads from 2020 ロビーズの禁止
- Eliminate all single use plastic by 2022
- India Plastic Waste Management Rules (2016) focused on municipal and rural levels but seldom imposed インドプラゴミ管理規制が2016年に制定されたが実行力はない
- Amendments to the Plastic Waste Management Rules in 2018 to ban non-compostable plastic bags less than 50 microns and phase out multi-layered plastic. 2018年に改訂されたプラゴミ管理規制によって50ミクロン以下の分解しないプラスチック袋が禁止、

INNOVATIONS イノベーション

- Transform non-recyclable plastic waste into usable low-sulphur synthetic fuel using “Advanced Supercritical Thermal Treatment” technology
- Fishermen in Kollam, Kerala, collecting plastic waste from sea that is shredded and used in constructing road
 - A 1km single lane road can integrate 1 tin of plastic and reduce bitumen use プラスチックを低硫黄燃料化、海で回収したプラゴミを粉砕して道路資材に



KEY FACTS AND FIGURES 概要

- Coastline : 644 kms 海岸線
- Population : 427, 756 persons 人口
- A chain of 26 atolls



Hills of plastic and other waste on an island of Maldives. Photo: UNDP Maldives 2016.

- Waste produced : 860 tons per day 1日のゴミ排出量860トン
- Waste produced by tourism industry : 21% 21%が観光産業のゴミ
- A single tourist produces 3.5 kgs of garbage per day 観光客は3.5キロ/日ごみ
- Waste from urban areas : 65% 65%が都市部のゴミ
- Waste from island communities : 35% 35%が島々のゴミ
- In 2016, Maldives imported 40 million plastic bags 2016年には4千万のプラスチック袋を輸入した

CHALLENGES 課題



- Plastic pollution is a growing catastrophe in the island nation
- Affects marine life mortality, fisheries and coastal area degradation, and damage to fragile ecosystems (reef systems)
- Adverse impact on tourism with decreased beach value
- Capital city, Male, faces recurring flooding due to blocked drainage system from plastic packaging
- Thilafushi Island in Maldives transformed into an artificial landfill in 1992, and receives 330 tons of garbage every day

プラゴミ汚染の増加によって海洋生態系がダメージ、観光産業にも打撃、首都マーレではプラごみによる下水の閉塞により度々洪水が発生、ティラフシ島は処分場に。





▲ Woman from
Photo: Sanu Ibrahi



▲ Maamendhoo Island Council President Ali Shifaz surveying the waste centre.
Photo: Sanu Ibrahim/UNDP Maldives

POLICIES AND REGULATIONS 政策や規制

- Signatory to UNEPs Clean Sea Campaign
- Maldives Parliament approved complete ban on single-use plastic from 2025
- In 2011, developed a solid waste management framework, and implemented 11 policies including waste management legislation, infrastructure, educate consumers and producers in better waste management
- No comprehensive recycling programme or enforcement of regulations on plastic bags use

2025年から使い捨てプラスチックの全面禁止を議会在承認、2011年に廃棄物管理の枠組みと政策を制定。総合的なリサイクルのプログラムやプラ袋の使用に関する規制はない

INNOVATIONS イノベーション

- Plastics and circular economy: UNDP funded several waste management centers in Laamu Atoll; communities equipped with waste management facilities, including clippers
- Maldives Authentic Crafts Cooperative Society (MACCS) advocates for and facilitates banning single use plastic bags in Malé to raise awareness

UNDP支援による廃棄物管理センターの設立、伝統工芸組合がマレーでの使い捨てプラスチックの禁止に向けた活動



KEY FACTS AND FIGURES 概要

- Coastline : 1,620 kms 海岸線
- Population : 21 million persons 人口
- Population in Coastal Areas : 14 million persons 沿岸の人口



世界で5番目の海プラごみ排出国
 毎年400mトンのプラ系ごみを排出
 2017年には海岸線1キロあたり103.38キロ
 のゴミを確認



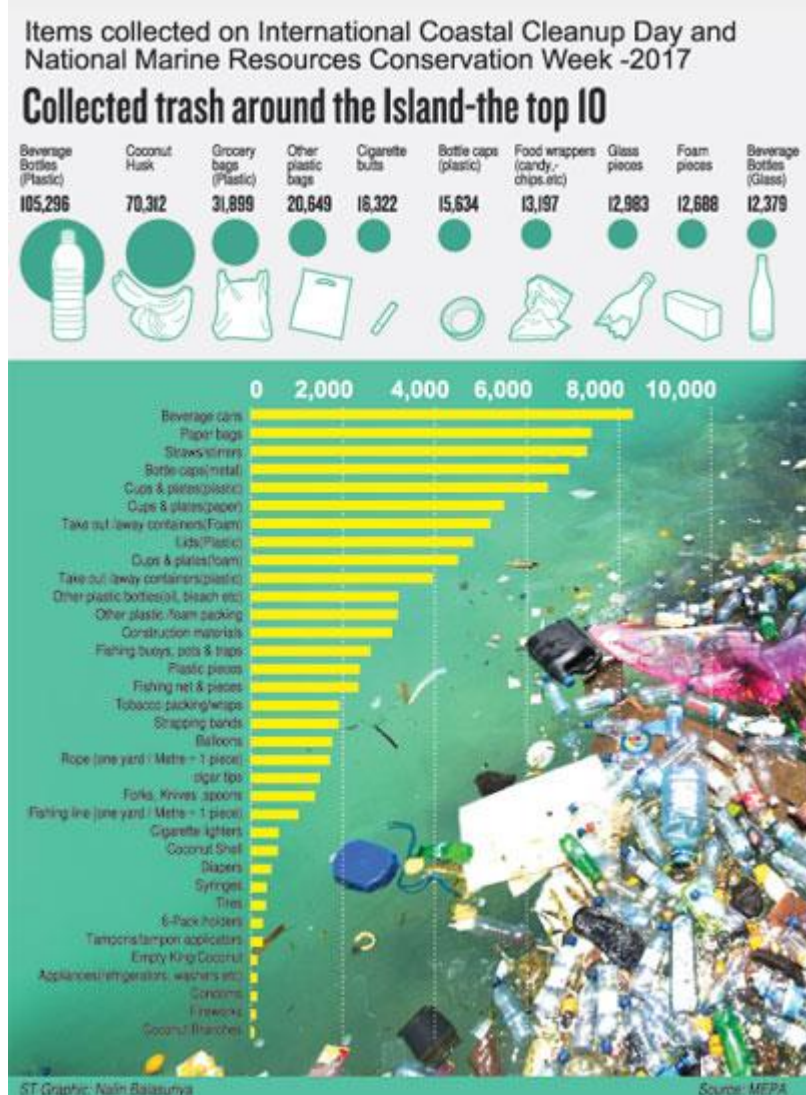
a. Gandara, Matara



b. Gurunagar, Jaffna

- Fifth largest contributor of plastic marine debris by volume, globally
- Total plastic/polythene waste generated : 400 metric tonnes
- Quantity of litter collected from coastal areas : 103.38 kg per km in 2017
- 90% of marine litter comes from SL land mass

CHALLENGES 課題



Significant environmental damage from marine litter: creates coastal dead zones; contaminates ecosystems; depleting fishing stocks
 Damage to tourism industry
 Coastal zone has 60 % of industrial units and 70% of country's tourism destinations
 Solid waste collection efficiencies are poor:

- Only 41.7% solid waste collected in Western Province (1.48 million HHs)
- Only 10.8% collected in Southern Province (636,406 HHs)



E - Waste



海洋ごみによって海の生態系・環境・観光業に大きなダメージをもたらしている。
 スリランカの工業の60%、観光業の70%は沿岸に立地。
 廃棄物の回収率は低い:西部では41.7%、南部では10.8%



POLICIES AND REGULATIONS 政策と規制

- Signatory to UNEPs Clean Sea Campaign
- National Environmental Act No 47 of 1980, in 2007 imposed ban on manufacturing and sale of polythene products less than 20 microns
- Marine Pollution Prevention Act no-35 passed in 2008
- National Action Plan for Marine Environment Protection under preparation
- In 2017, imposed ban on lunch sheets, shopping bags, high density poly ethylene (HDPE)
- Ban on the import, sale, and use of polyethylene bags <math><20\mu</math> and Styrofoam containers

2007年に20ミクロン以下のポリ製品の販売を禁止、2008年に海洋汚染防止法を制定、海洋環境保護のための行動計画を策定中、2017年にはランチマット、買い物袋、高密度ポリエチレンを禁止、ポリ袋の輸入・販売・使用を禁止

INNOVATIONS イノベーション

- On-going collaboration with South Asia Co-operative programme (SACEP) and South Asia Seas Programme (SASP) for developing a regional management plan on marine litter and micro plastics

南アジア協力プログラム・南アジア海洋プログラムなど海洋ゴミやマイクロプラスチックにアジア全域で取り組む枠組みを検討