

PLASTIC PLANET

Some eight million tonnes of plastic are dumped in the ocean every year, equal to five grocery bags of plastic on every foot of coastline around the world, according to Ocean Cleanup. And with annual production set to soar to more than one billion tonnes by 2050, manufacturers, retailers and consumers must take responsibility to reuse, recycle and close the loop on plastic waste

GLOBAL PLASTIC MATERIAL FLOWS

● Key stage ○ Breakdown of process



PRODUCED

Plastic packaging production (from virgin/recycled plastics)

IN-USE DELTA

Net increase of plastics stock in economy (difference between stocks at the end of the year and the beginning)

AFTER USE

Plastic packaging discarded

LEAKED

Uncollected after-use plastic packaging, includes unmanaged/mismanaged (illegal dumping, mismanaged open dumps)

SAFELY COMPOSTED IN BIOSPHERE

Safe composting of after-use plastics outside collection system (in nature/at home)

COLLECTED AND MANAGED

After-use plastic packaging collected and managed in a controlled way

INDUSTRIALLY COMPOSTED

Industrially composting and/or aerobic digestion

RECYCLED

Recycling (input measure, not output measure)

INCINERATED AND/OR ENERGY RECOVERED

Incineration with or without energy recovery, as well as other energy recovery processes

SANITARILY LANDFILLED

Sanitary landfilling

FORECAST PLASTIC VOLUME GROWTH BUSINESS-AS-USUAL SCENARIO

○ 2014 ● 2050

Plastics production (tonnes)

1,124m

311m

Plastics' share of global oil consumption

20%

6%

Plastics' share of carbon budget

15%

1%

○ Plastic ● Fish

Ratio of plastics to fish in the ocean, by weight

2014

2050

ESTIMATED DECOMPOSITION RATES YEARS TO BIODEGRADE



Plastic water bottles



Aluminium cans



Foamed plastic cups



Plastic bags

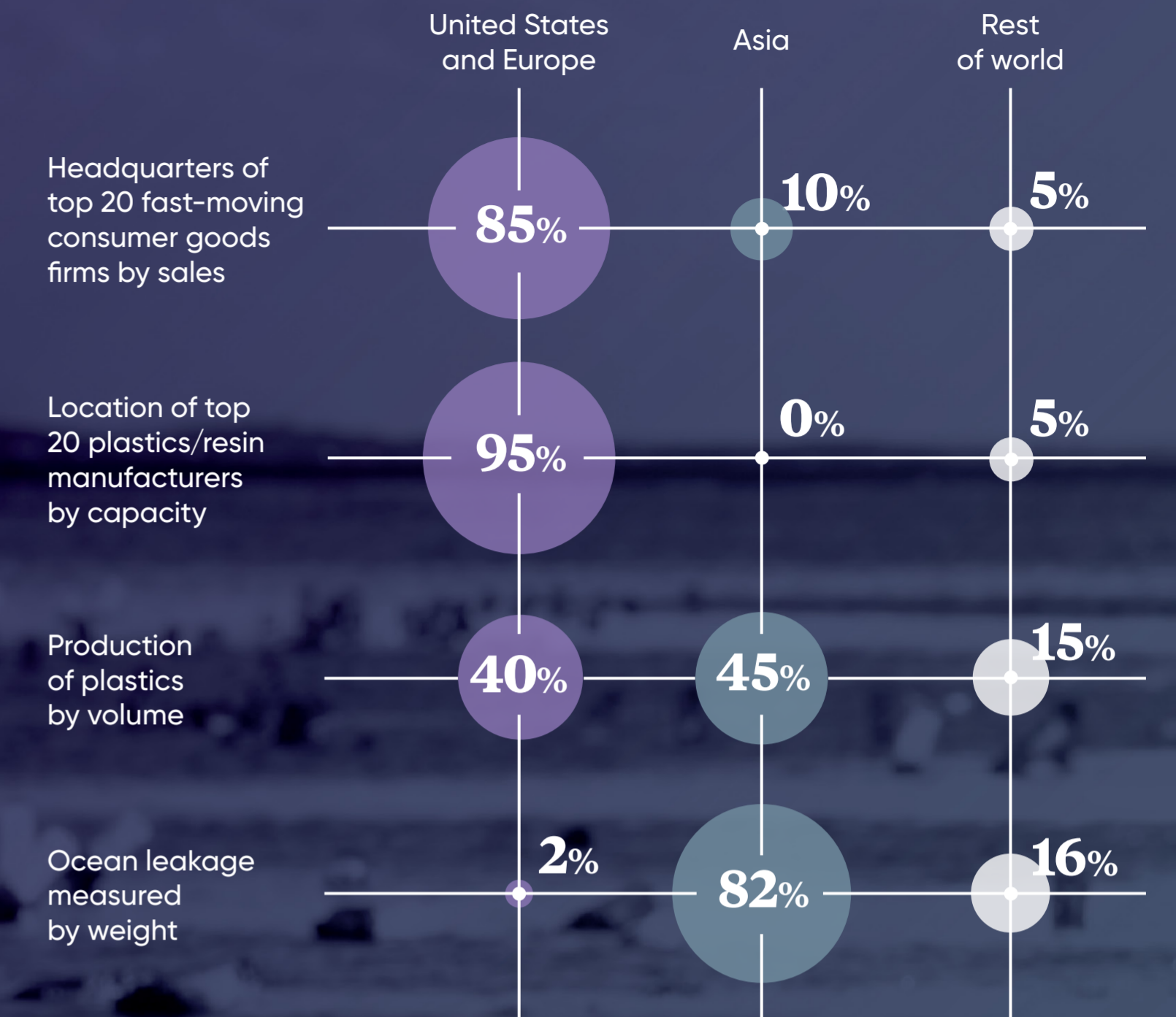


Cigarette butts

World Economic Forum/Ellen MacArthur Foundation/PlasticsEurope/International Energy Agency 2016

Ocean Conservancy

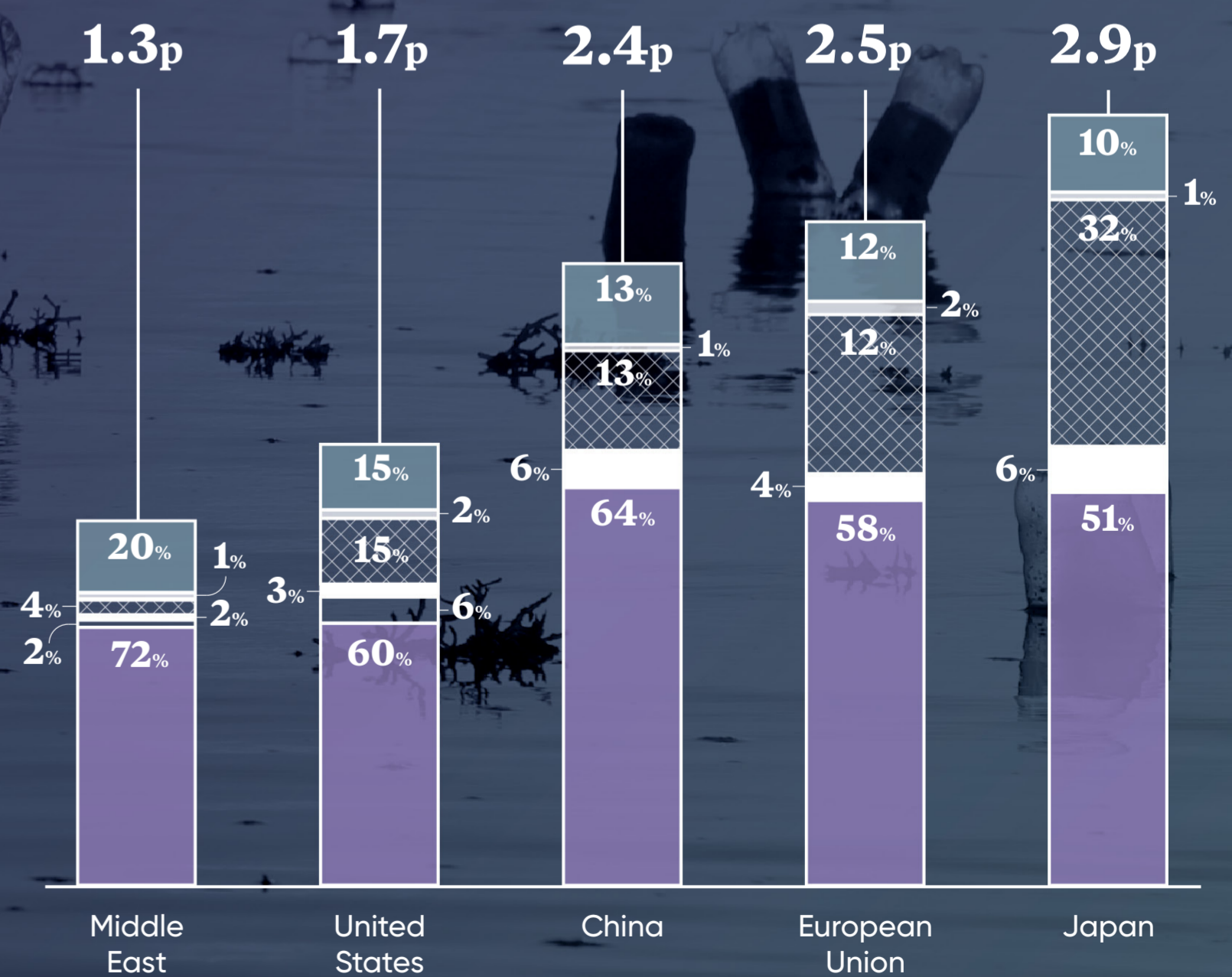
LOCATION OF PLASTICS PRODUCTION AND LEAKAGE



World Economic Forum/Ellen MacArthur Foundation/PlasticsEurope 2016

ESTIMATED COST OF PRODUCING A PLASTIC BOTTLE COST IN PENCE

○ Naphtha ○ Ethane ● Electricity ● Fuel ● Labour ○ Other



International Energy Agency 2014