



The Agrochemical Supply Chain

Typical Security Vulnerabilities in the Supply Chain

Identifying Dual Use Agrochemicals and Potential Hazards and Risks

Technical Session 1

Vipin SAINI

Executive Director

Agro Chem Federation of India

Factors Contributing to Vulnerability

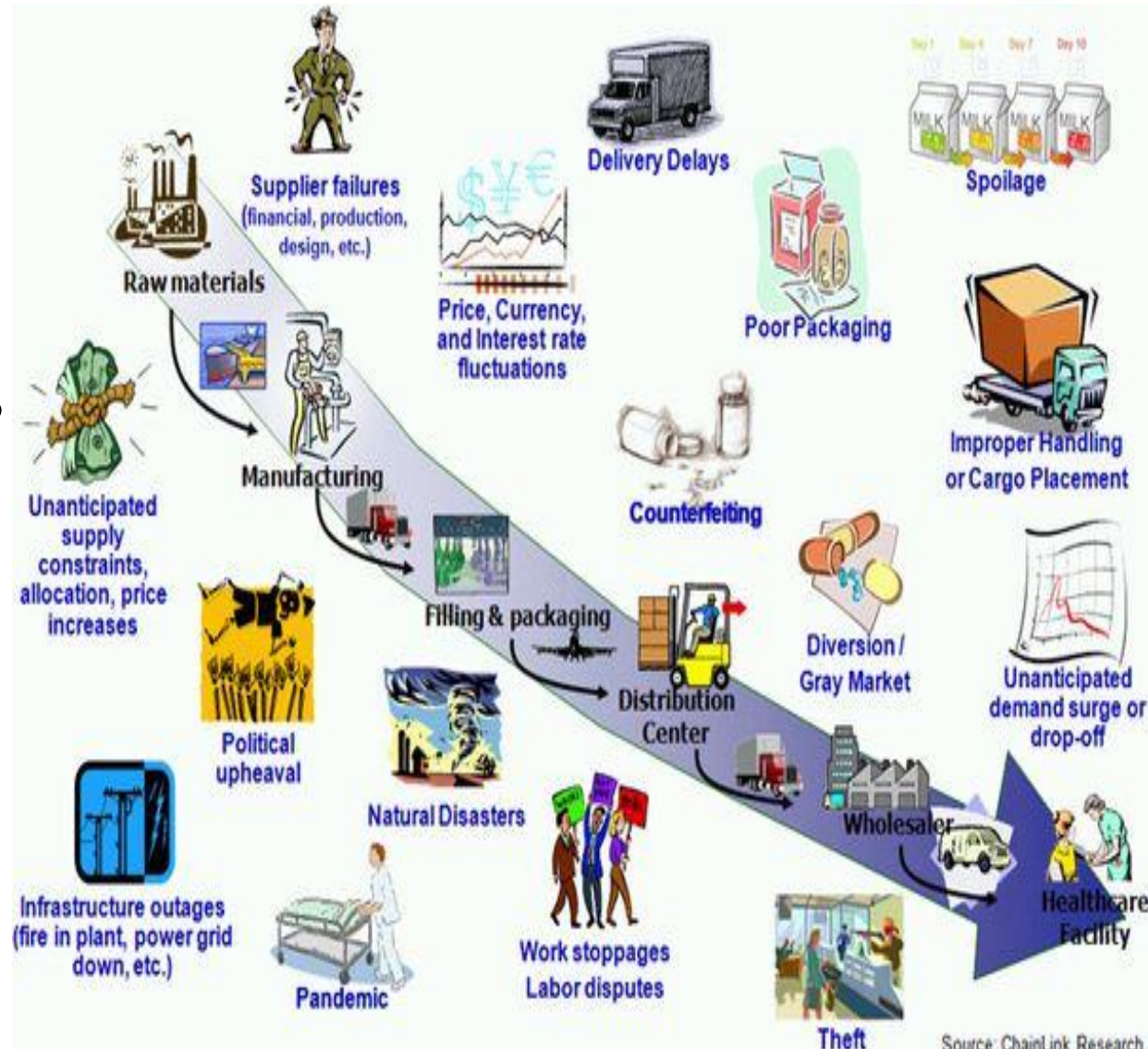
GOI Inter-ministry Involvements

Policy & Regulations

Standards

Logistics & Storage

National Chemical Disaster Plan



Source: ChainLink Research

Policy & Regulations



Dual Use Chemicals Regulation under the Insecticides Act., 1968

Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

National Chemical Inventory

Bureau of Indian Standards

National Chemical Disaster Management



Indo-US Workshop on Security of Dual Use Agrochemicals 'Improving Security at Vulnerable Locations in the Agrochemical Supply Chain' August 1st, 2017, NASC Complex, New Delhi



Indo-US Workshop on Security of Dual Use Agrochemicals 'Improving Security at Vulnerable Locations in the Agrochemical Supply Chain' August 1st, 2017, NASC Complex, New Delhi



Grow Safe Food



Department of Agriculture, Cooperation & Farmers Welfare
Ministry of Agriculture & Farmers Welfare



Indo-US Workshop on Security of Dual Use Agrochemicals 'Improving Security at Vulnerable Locations in the Agrochemical Supply Chain' August 1st, 2017, NASC Complex, New Delhi



**Any Concerns
of
Drums
carrying
Liquid chemicals
along with
Gas Cylinders**

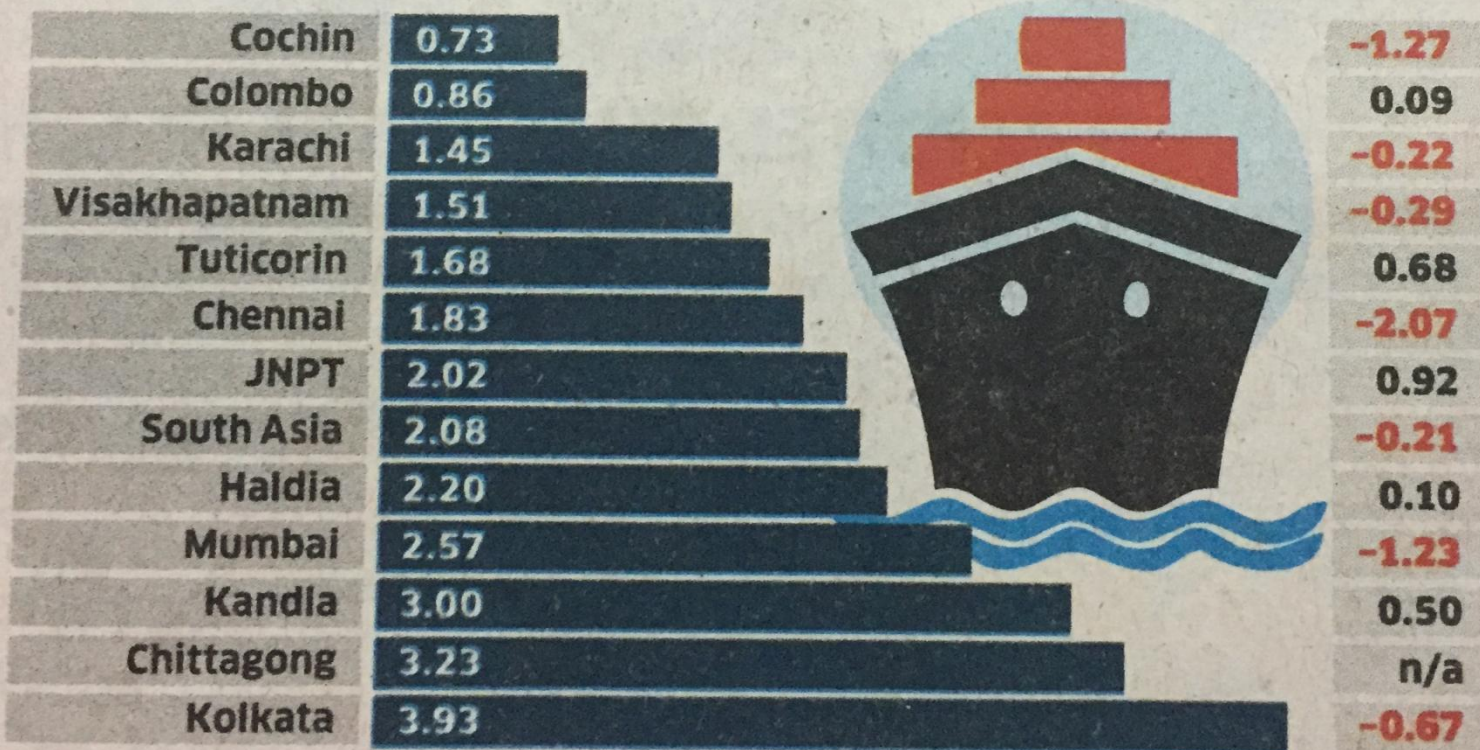
Indo-US Workshop on Security of Dual Use Agrochemicals 'Improving Security at Vulnerable Locations in the Agrochemical Supply Chain' August 1st, 2017, NASC Complex, New Delhi

Port Efficiency

The average vessel turnaround time at South Asian container ports declined between 2000 and 2012, but there are wide regional variations. While vessel turnaround in Chittagong and Kolkata takes much longer than average, ships spend much less time at Colombo or Cochin ports...

Annual average turnaround time (days) at South Asia's container ports, 2012

Increase/decrease (days) since 2000



Source: Competitiveness of South Asia's container ports (World Bank)

Chemical to be imported from US to combat apple disease

TRIBUNE NEWS SERVICE

SHIMLA, MARCH 25

In its bid to combat the problem of Specific Apple Replant Disease (SARD), the government has obtained permission from the Central Insecticides Board, Union Ministry of Agriculture, for the import of chloropicrin chemical along with machinery and equipment.

Principal Secretary Jagdish Sharma today said the HPMC would import this chemical from the USA for providing it to the University of Horticulture and Forestry, Nauni, for trials. He said the availability of chloropicrin chemical would go a long way in managing soil-borne pathogens affecting other fruits, vegetables and floriculture crops.

He said the chemical would be helpful in treating the soil in polyhouses between crop cycles. "Chloropicrin is the best chemical which has been an effective combatant in the war against SARD. The chemical was not registered in India till date and thus,



About the chemical

- Chloropicrin is the chemical used to combat specific apple replant disease.
- The chemical has not been registered in India till date and thus, could not be manufactured or imported from outside for the use in soil treatment.
- Keeping in view the importance of the chemical, the Centre gave permission for the import of chloropicrin

could not be manufactured or imported from outside for the use in soil treatment," he stated.

He said keeping in view the importance of the chemical, necessary steps were initiated under the ambitious Rs 1,134 crore World Bank funded HP Horticulture Development Project

for getting the chemical registered in the country. The Centre gave permission for the import of chloropicrin.

The multi-location trials would be conducted in Shimla, Solan and Kullu districts during the current year. This would pave the way for registration of this chemical in India. This was one of the major initiatives by the state government which would especially benefit the apple growers of Shimla, Kullu and Mandi districts where the orchards had become too old and senile and need immediate replacement with latest varieties and root stocks.

Sharma said it had been a matter of concern for farmers, extension officers and scientists that new plantations did not perform well owing to SARD that occurs when apple trees were planted in soil where similar species had been grown previously. SARD was not only limited to apple trees but it also affects roses and a number of other fruit trees, including cherry, citrus, peach, pear, plum and quince.



Chloromethyl pyraidine

School near Dry Port right in a populated area



Leakage of harmful chemical plugged



450

Girl Students

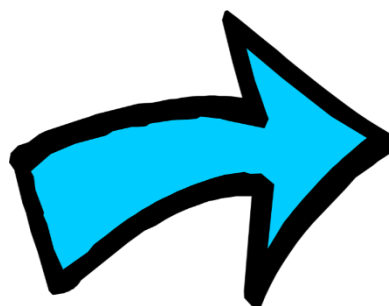
hospitalized

**after exposure
to
toxic fumes**

The Agrochemical Supply Chain

Typical Security Vulnerabilities in the Supply Chain

Identifying Dual Use Agrochemicals and Potential Hazards and Risks



धन्यवाद

Thank you for
your attention



409, 4th Floor, Salcon Aurum, District Centre Jasola, New Delhi-110025
INDIA

Email: executivedirector.acfi@gmail.com

Tel: +91-9910700583