



Specific Challenges of Hill States in Solid Waste Management



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- ☐ GIZ is a federally owned organisation of the Government of Germany.
- ☐ Our mandate is to support the German Government and Governments in partner countries.
- ☐ We provide viable, forward-looking solutions for political, economic, ecological and social development in a globalised world.
- ☐ GIZ has operations in 130 countries.



Further details at <http://www.GIZ.de/en/>

About IGEP



- ❑ IGEP is the Indo German Environment Partnership Program.
- ❑ Our mandate is to support the Ministries of Environment & Forests and Urban Development, Government of India in the fields of Industrial and Urban areas with special reference to Environmental issues & Municipal Solid Waste in urban areas
- ❑ We support 4 cities of Shimla, Tirupati, Nashik, Raipur and States of HP, AP and Chhattisgarh in MSW.



Further details at <http://www.GIZ.de/en/>





Shimla



Shimla







Dharamshala



Una



Shimla



Talai



Palampur



Chamba



Nahan



Manali





Solan



Shimla





Shimla – landfill site





Baddi



Hamirpur



Chamba



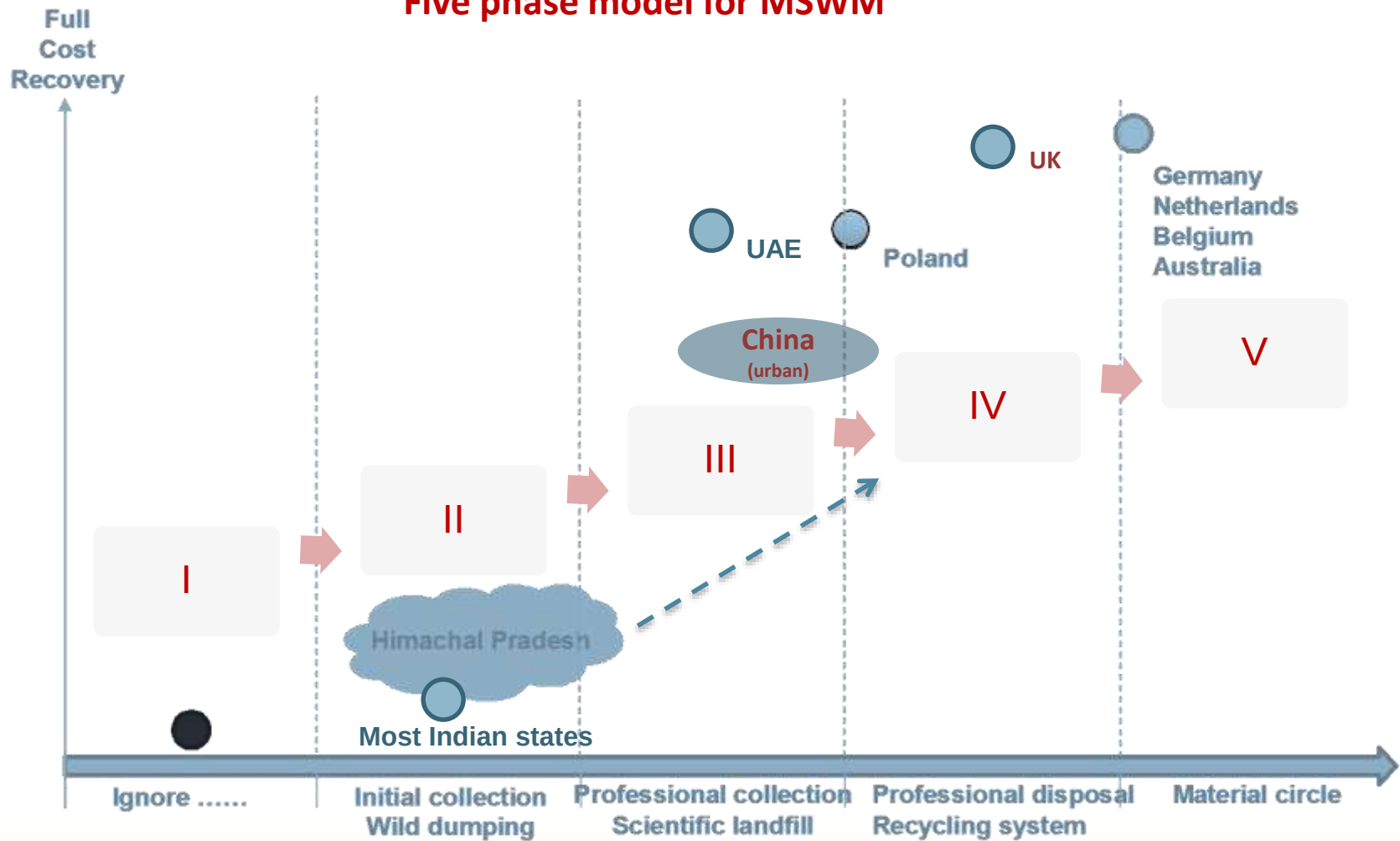
Constraints for hilly areas in SWM

- Difficult terrain
- Land issues
- Small size of towns
- Technical Issues
- Financial issues
- Institutional issues – lack of staff
- Capacity Building - Lack of technical know-how

Positioning of HP

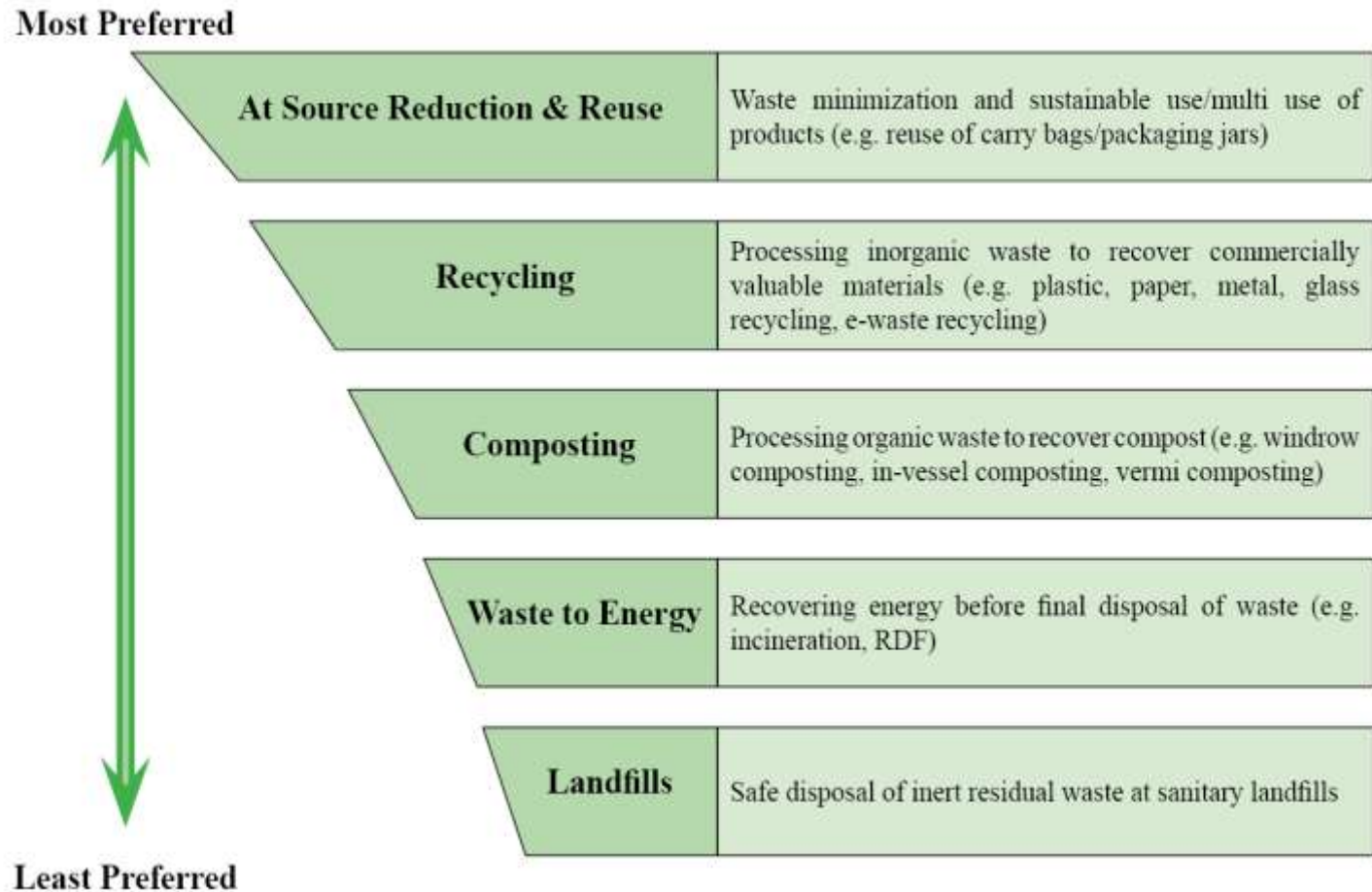


Five phase model for MSWM



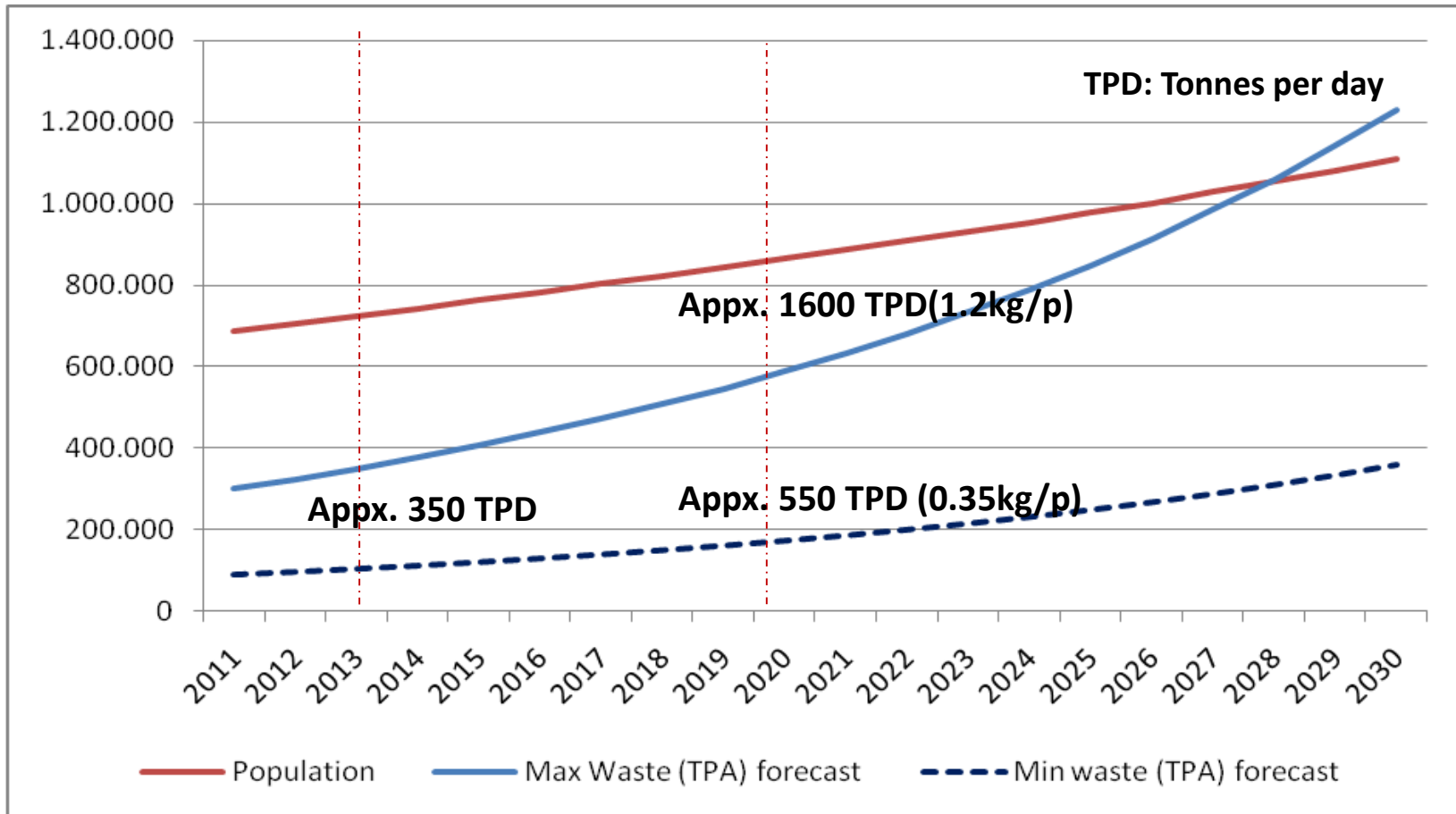


MSW Strategy based on Waste Management Hierarchy



Initial Forecast*

for urban municipal solid waste generation in Himachal Pradesh



Max Waste forecast is considering the expected changes in consumer behavior due to urbanization and economical growth

Strategic Aspects



① ② ③ ④ ⑤

“Operations can be outsourced, not the responsibilities”

Framework – Responsibility and Policies for Waste Management

Policies for MSWM – State and ULB level

- Directions towards initial **prevention of use of wild dumpsites with gradual phase out**
- **Incentivise recycling** to attract private participation and investment in the recycling infrastructure e.g. by coming up with more private projects / pilots
- **Recognizing and regularising the informal sector**
- The policies shall go hand in hand with the **fixation of user charges/producer charges** as the charges shall cover the operations carried out

Political inclusion

- Political influence should be unbundled from the administration
- **Extended Producer Responsibility**

Strategic Aspects



“Sustainable operations follow sustainable MSWM planning”

Develop a State SWM Strategy and Regional Plan

Sustainable **financial planning** and forecast for MSWM services

Identification of appropriate treatment based on MSW characteristics, flows and **database**

Follow waste hierarchy – 3R, material recovery, energy recovery, landfilling

Centralized Vs. Decentralized

Identification of **regional sites** for scientific landfills

Closure / rehabilitation of wild dump sites

Environmental monitoring

Public Private Participation;

Integration of informal sector;

Reach to un-served population

Complaint redressed system

Stakeholder consultations

Strategic Aspects



“Skilled and responsible human resource is the back-bone of any sustainable management system”

Human Resource – Institutional Capacities and Capacity Building

Dedicated authorities

- **Institutional strengthening & Single point responsibility** at each level (**State – Local**)
- **Functional divisions** separate from general service delivery functions
- Separate **SWM cell at district / regional level**

Institution & Capacity building program

- Develop **sector specific** practicable **staffing plan** to bridge the gap between existing and required human resource
- Encourage **performance linked incentives to improve efficiency in deliverables**
- **Deploy experts in MSWM** to fill current top line vacant positions in smaller ULBs

Improve co-ordination with the local / regional pollution control boards

Strategic Aspects



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① ② ③ ④ ⑤

*“Educated and aware social environment
facilitates sustainable operations”*

Awareness and Education

Legislation and Enforcement

- Formation of **guidelines for enforcing the regulations for service delivery level**
- Fast track **judiciary** with specialised lawyers with an Environmental Law background shall be allocated and **team up with MSWM experts** (public and private)
- **Involvement of PCBs** in framing these acts and monitoring of its implementation

Awareness and Education (IEC)

- **A communication plan at state level for strategy** to be implemented simultaneously **by all ULBs**
- Focus on **promoting recycling and encourage decentralized systems**
- Education sessions at **school towards responsible waste management**

Strategic Aspects



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“Only balanced economics leading towards full cost recovery can keep the SWM sustainable”

Economics of SWM

Full cost accounting, recovery and target self financing

- **Evaluation of actual financial gap** between cost and expenditure towards modern MSWM in model ULBs through a consultative process
- Formation of **unified payment and account-keeping system**
- **Gradual transition towards full cost recovery** of MSWM services according to **“waste producer pays”** principle
- Refomation and **unification of methodology for formation of taxes, charges/surcharges, fees for execution of MSWM services**
- Financing of investment through **public resources** like state funding, surcharges, taxes, service fees etc and through **private capital in PPP structures**



Define Immediate Steps

- Establish Steering Group and provide Guidance at State Level for
- Guidance from State to all ULBs
- Appoint Requisite Staff at State, Regional, Local levels
- Capacity building of Staff – state, regional, local
- Generating actual waste statistics at ULB level
- Introduction of door-to-door collection
- Up-gradation fleet of transport vehicles
- Centralized Vs Decentralized
- Regional/ Local -
 - Material recovery Facilities & dry waste recycling centres
 - Sanitary Landfill facilities
- Closure of dumpsites phase wise

Road-Map for Strategy Implementation

Strategic Aspects	2013	2014	2015	2016	2017	2018
Framework - Responsibilities and Policies for Waste Management						
Extended Producer Responsibility						
Policies for Himachal Pradesh SWM						
Develop and implement State, Regional and City SWMP						
Solid Waste Database						
Closure of wild dumpsites						
Environmental Monitoring						
Private Participation						
Integration of informal sector						
Reach to unserved population						
Cooperation						
Capacity Building						
Dedicated Authorities						
Capacity building programme						
Consultation						
Awareness & Education						
Legislation and Enforcement						
Awareness and Education						
Economics of MSWM						
Sustainable financial structure						
Full cost accounting, recovery and self-financing, user charges						



Thank You

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