

Institutionalization of the GHG Inventory: Waste Sector

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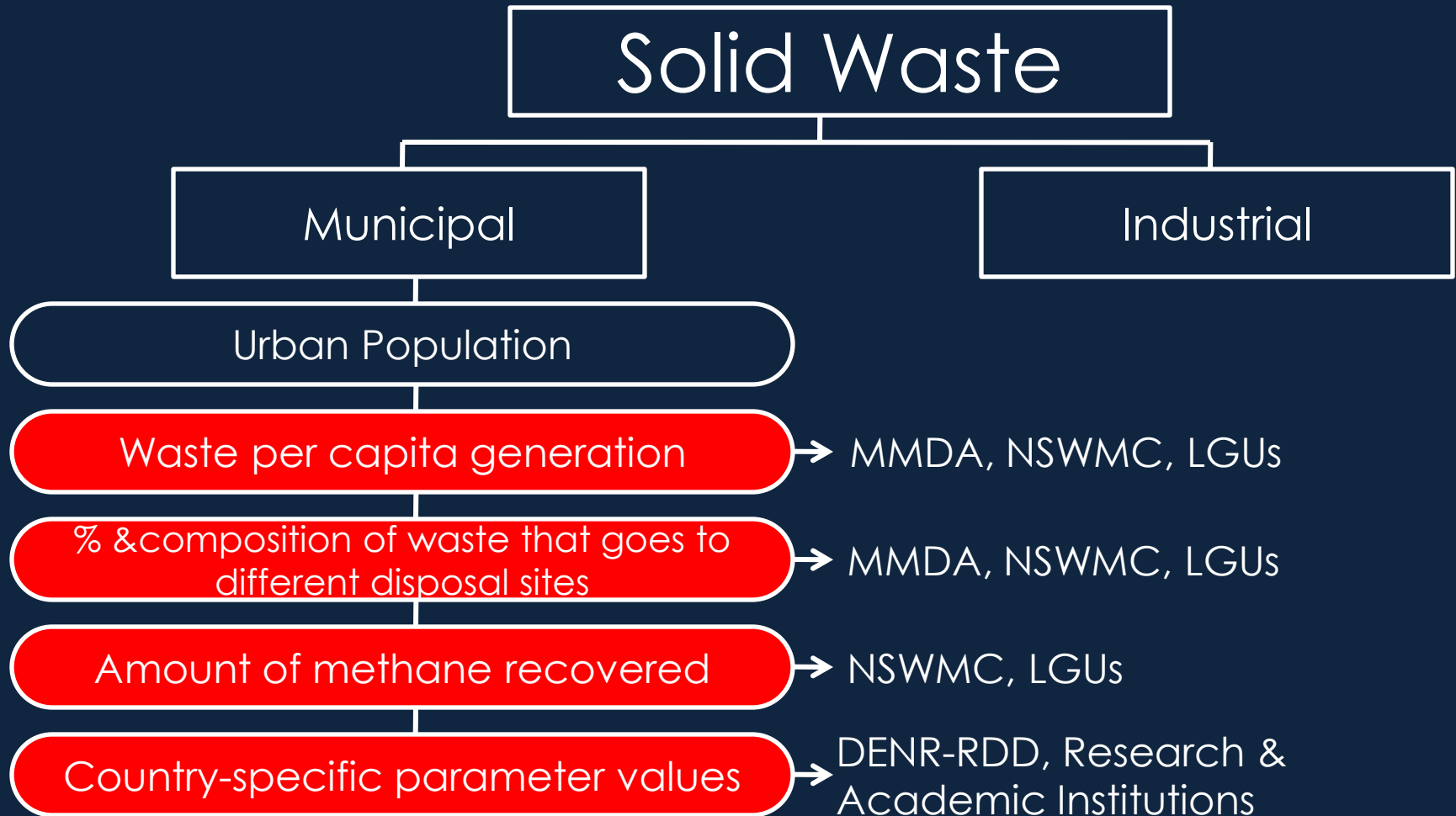
Sectoral Contribution

Waste Subsector	CO ₂ Emissions (Gg)
Solid Waste	5,439
Municipal Wastewater	3,719
Industrial Wastewater	1,348
Human Sewage	1,050
TOTAL	11,556

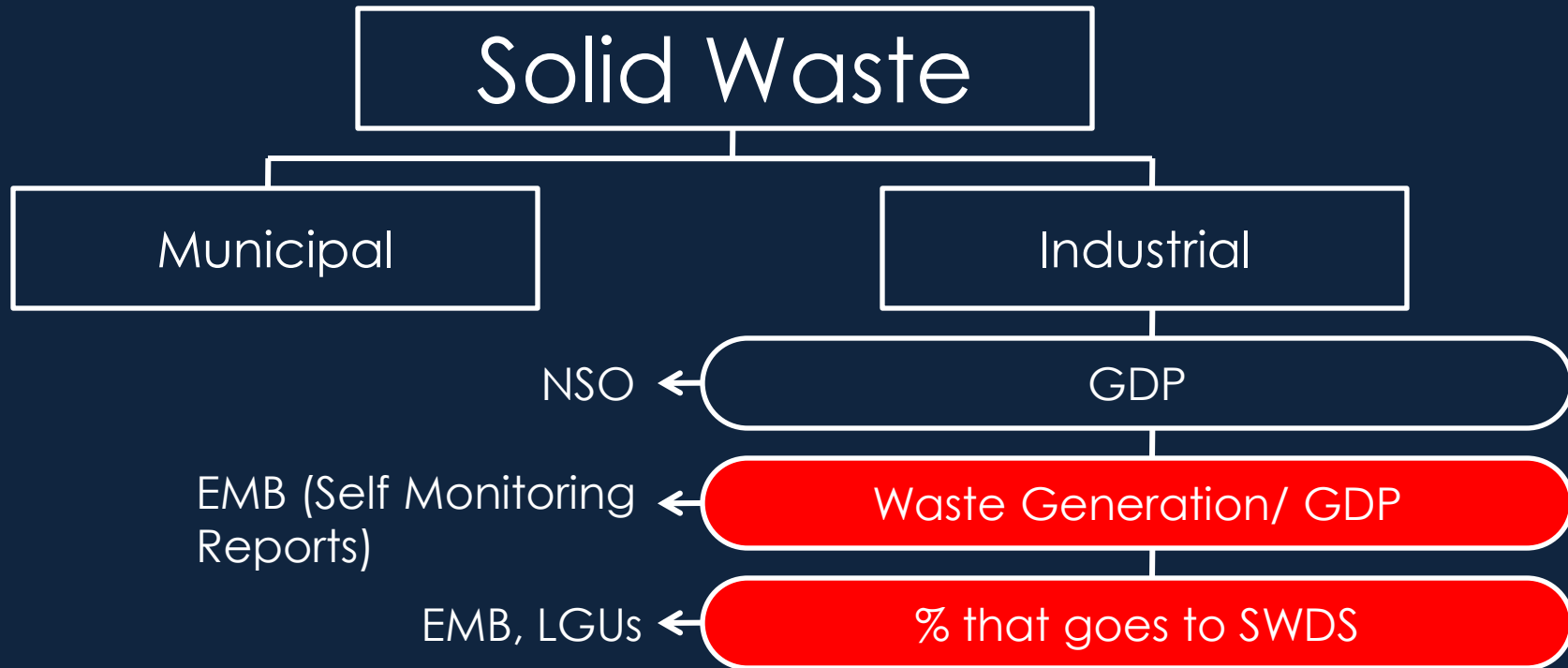
Data Requirements per Subsector



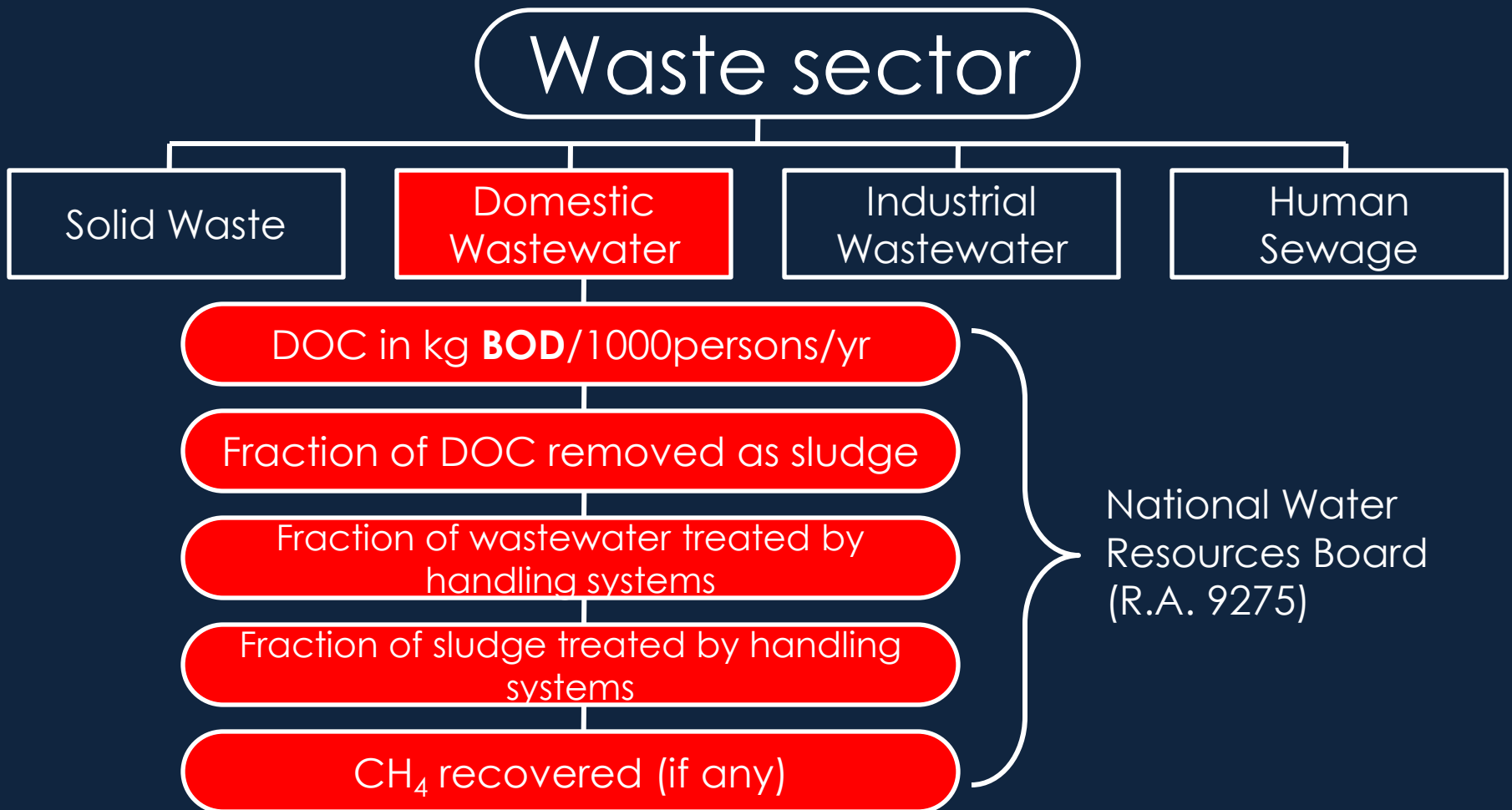
Data Requirements per Subsector



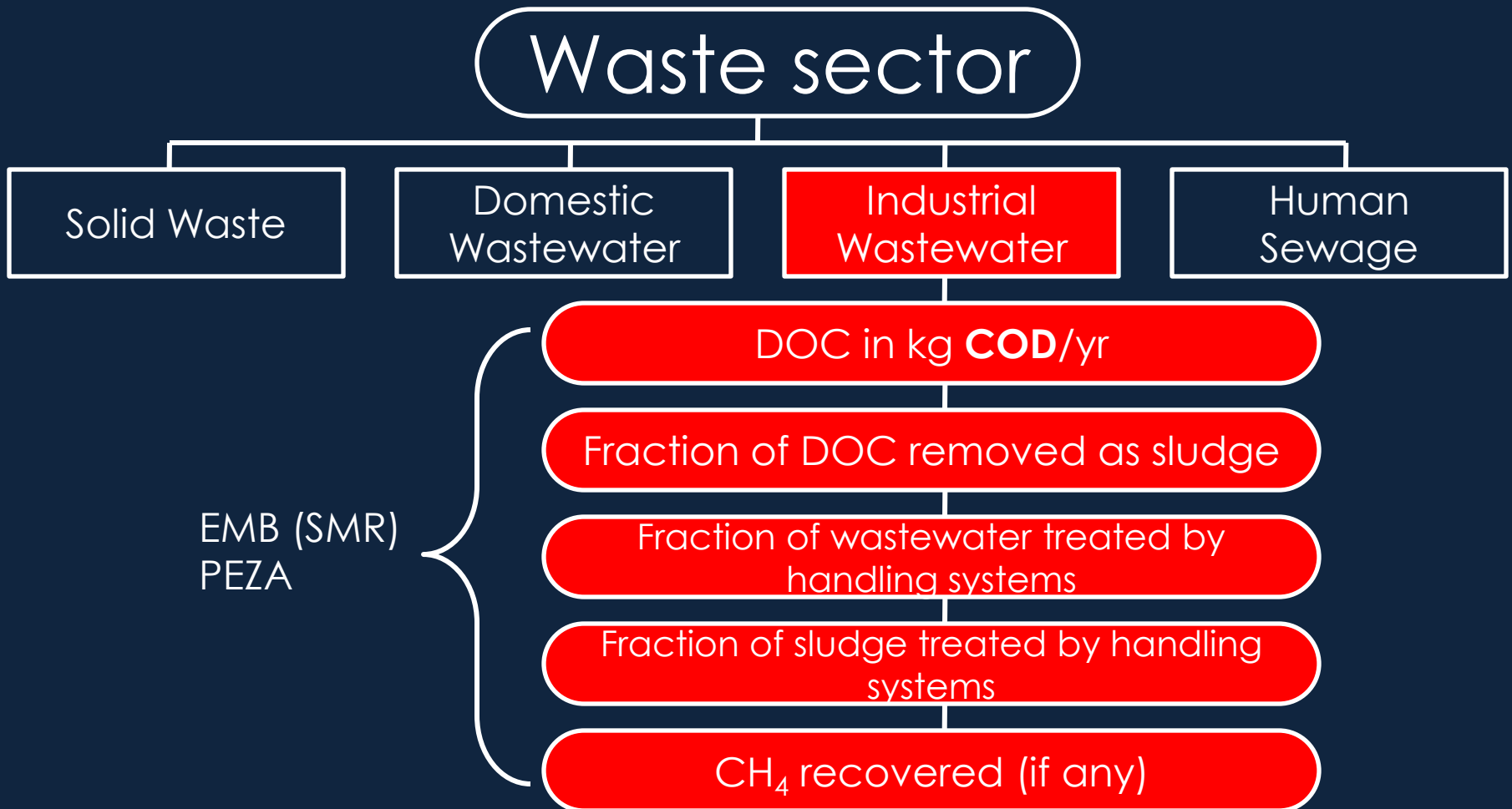
Data Requirements per Subsector



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Data Requirements per Subsector

Waste sector



National Water Resources Bureau
Food and Nutrition Research Institute
National Statistics Office

- Per capita protein consumption
- Amount of sewage applied to soils as sewage sludge
- National Population

Recommendations

DATA	RECOMMENDATION
Solid Waste (Municipal and Industrial)	Nationwide values have to be determined
Local values for country specific parameters (Methane Correction Factors and Emission Factors)	Has to be determined experimentally under the provision of DENR-RRD in partnership with research and academic institutions
Waste per capita generation rate	LGU's should conduct a survey yearly and has to be reported to to the DILG and to the NSWMC for compilation.
Percentage of municipal wastes that goes to the disposal sites	LGU's should conduct a yearly inventory deriving from the amount of waste that goes to the MRF, reported to the DILG and to the NSWMC for compilation.

Recommendations

DATA	RECOMMENDATIONS
Solid Waste (Municipal and Industrial)	
Percent composition of municipal wastes that goes to the disposal sites	LGU's should conduct a waste inventory yearly, reported to the DILG and to the NSWMC for compilation.
Industrial waste generation rate	Should be stated in the industries' Self Monitoring Reports (EMB) EMB should make a database of the consolidated data PEZA should also monitor and consolidate the data

Recommendations

DATA	RECOMMENDATIONS
Solid Waste (Municipal and Industrial)	
Percentage of industrial waste going to the disposal sites	Should be stated in the SMR and to be compiled by EMB
Amount of methane recovered	<p>The LGU of the area where the disposal sites are located should be responsible in accounting for this data of recovery is practiced.</p> <p>Data should be forwarded to the NSWMC for compilation.</p>

Recommendations

DATA	RECOMMENDATIONS
Domestic/Commercial Wastewater	Nationwide data is needed
Degradable Organic Compound	To be determined by the RRD, in partnership with research and academic institutions, should conduct a yearly study.
Fraction of DOC removed as sludge, fraction of wastewater and sludge treated by handling system	Data should be quantified by the local sewerage entities and forwarded to the LGU's and to the NWRB for compilation If there is no centralized handling system, the LGU's must do a survey regarding the individual households wastewater handling system.

Recommendations

DATA	RECOMMENDATIONS
Domestic/Commercial Wastewater	
Methane recovery	Data should be determined by the local sewerage entities if applicable and forwarded to the LGU's and to the NWRB for compilation

Recommendations

DATA	RECOMMENDATIONS
Industrial Wastewater	Nationwide data is needed
COD loads	Parameter used in the SMR's are in BOD instead of COD; should also be stated in COD EMB should make a database of the compiled data; PEZA should also monitor and consolidate the data
Fraction of DOC removed as sludge, fraction of wastewater and sludge treated by handling system	Should be stated in the industries' Self Monitoring Reports (EMB) EMB should make a database of the consolidated data; PEZA should also monitor and consolidate the data

Recommendations

DATA	RECOMMENDATIONS
Human Sewage	Nationwide data is needed
Per capita protein consumption	The DOST-FNRI, in partnership with research and academic institutions should do a yearly study to determine this data.
Amount of sewage applied to soils as sewage sludge	Data should be quantified by the local sewerage entities and forwarded to the LGU's and to the NWRB for compilation.

Institutionalization



DENR

Establish Country-specific parameters

Research & Development Division

Partnerships with Research & Academic Institutions

Comprehensive Data

NSWMC

MMDA
LGUs
EMB
PEZA

LWUA,
MWSS

Local Sewerage Entities
LGUs
EMB
PEZA

Enforcement of Environmental Laws