



Tackling environmental AMR

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AFRICA-ASIA VIRTUAL WORKSHOP

Containing the 'Silent Pandemic'

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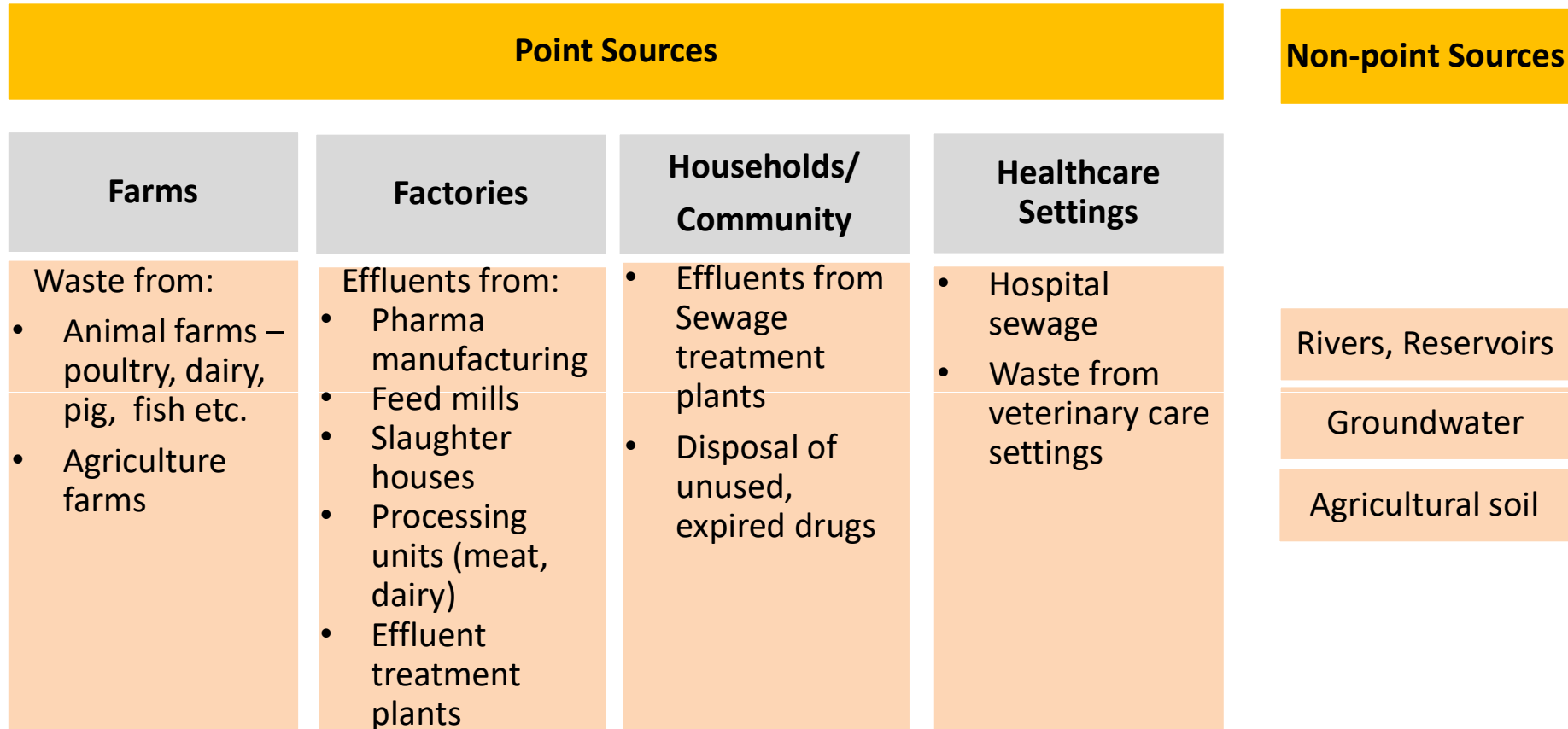
Environmental AMR in NAPs and country-level preparedness

- **Environmental AMR is covered in National Action Plans in most cases**
 - indicates need, desire, stakeholder consensus
 - aligns with the overall mandate of preventing chemicals/polluting entities into the environment
 - focus on multiple aspects -surveillance, waste management, biosecurity
 - despite limited focus on waste management, sanitation, IPC (in LMICs)
- **Limited on-the-ground progress so far** for reasons such as:
 - AMR issue is **complex and crosscutting**
 - **Evidence not yet fully consolidated**; still emerging (transmission pathways/risk assessment)
 - The issue is **heavily dependent/focused on surveillance**, which is resource intensive and technically demanding
 - Historical focus of regulators **on pesticides and heavy metals**; whereas AMR is different; it is also a microbiology issue
 - **Absence of global guidance** – the national agenda struggles to move

Environmental AMR covered in NAPs but implementers less equipped/prepared to take it forward



Structure of the Environmental AMR problem

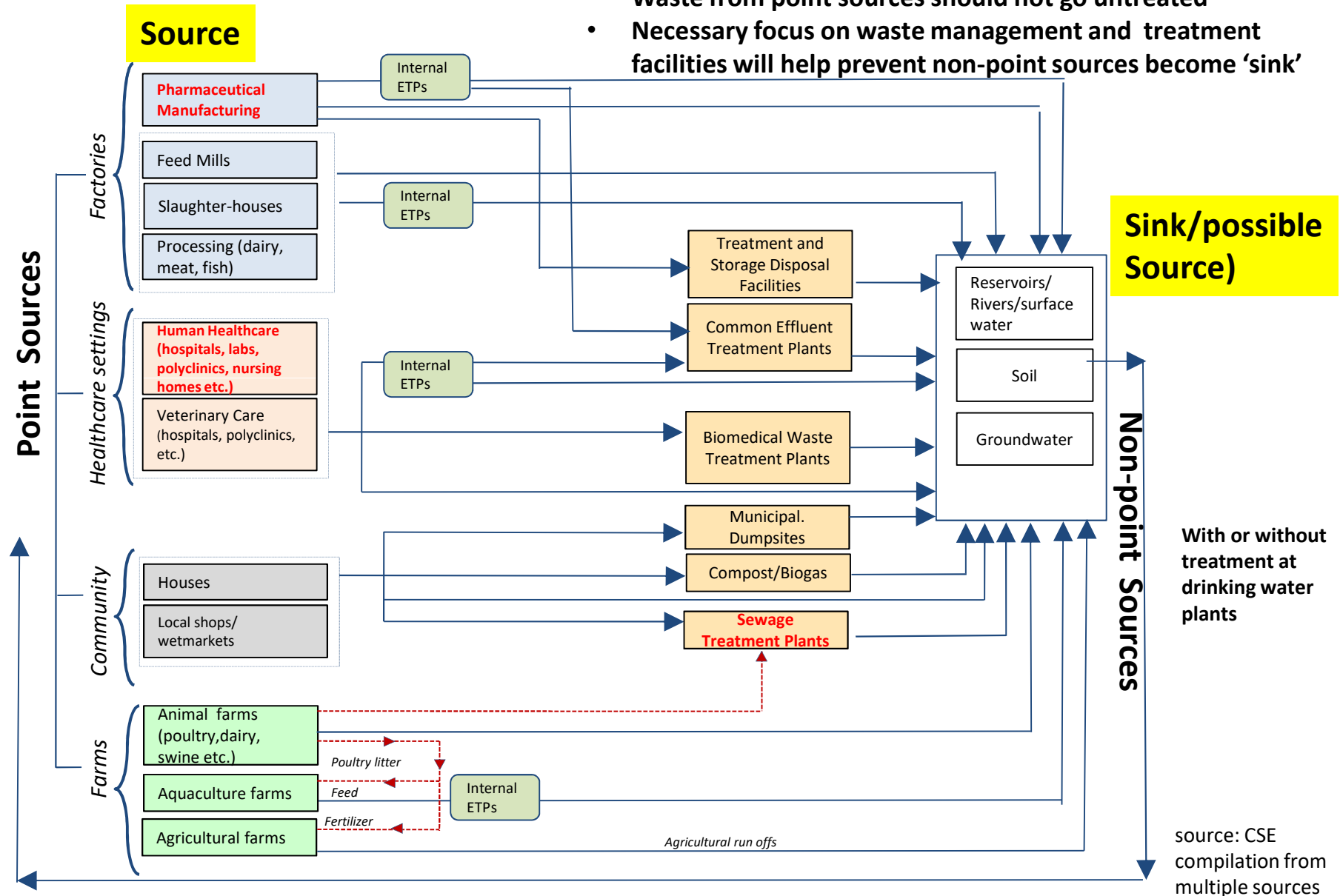


Three AMR determinants (antibiotic residues, resistant bacteria, antibiotic resistance genes) travel across multiple systems and multiple sectors—cross cutting and resource intensive



Sources/pathways/hotspots: focus on waste management critical

- Waste from point sources should not go untreated
- Necessary focus on waste management and treatment facilities will help prevent non-point sources become 'sink'





Gaps in global/national technical guidance and standards; it may take time but the environmental agenda cannot be delayed any further

- **No standards/limits for AMR determinants in waste at the national and global level**
 - Not even from hotspots like pharmaceutical industry (**industry prefers voluntary code/limits**; without global best practice, even the Indian initiative to develop antibiotic discharge limits seem to be pushed back by industry)
 - Current waste standards in most cases are about BOD, COD, which do not help
 - It is also expensive to monitor antibiotics in the environment; governments are wary of including these as pollutants because of this
- **Technical guidance by global/national agencies limited**
 - Such as on how to manage waste from farms/factories/house hold and healthcare settings w.r.t. AMR (recently, technical brief on role of WaSH and wastewater management came up); National level guidance exist in some cases but not aligned to the cause of AMR
 - Such as on monitoring / surveillance of environmental AMR
 - Guidance from Inter-governmental organization on environment (UNEP) is awaited



Way ahead

- **Prioritize and invest in the environmental AMR agenda (national/global) as part of a true one-health action**
- **Focus on preventative aspects.** Need to reduce antibiotic use at the first place, so that we pollute less. This will help avoid getting slowed down due to resource-intensive surveillance/monitoring
- **Manage waste well through AMR-centric approach: but make it relevant and affordable for emerging world: Build capacity; identify hot-spots; set standards/discharge limits for hot-spots and work towards preventive management**
 - Set necessary guidelines/SoPs (land application of farm waste plays a crucial role for enhancing fertility and productivity and so we need careful guidance on this)
 - Standard setting for 'hot spots' and waste streams/wastewater plants that are easier to identify and monitor



Thank you

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