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The Proximity Principle in EU Waste Policy: Overview and Commentary

The proximity principle, enshrined in EU waste policy, mandates that waste should be managed (disposed of, recovered, or recycled) as close as possible to its point of generation to minimise environmental impacts from transportation, such as greenhouse gas emissions, traffic congestion, and resource depletion. This principle promotes local self-sufficiency in waste handling, aligning with broader circular economy goals by encouraging regional infrastructure development and reducing long-haul shipments. While it fosters sustainability, it can introduce practical challenges, such as capacity constraints in densely populated or underdeveloped areas, potentially leading to higher local costs or reliance on suboptimal facilities. Overall, it represents a balanced environmental imperative, though enforcement varies by Member State due to its qualitative nature.

EU Law and Regulation, and Alignment with Irish Law

The proximity principle is a core tenet of the EU Waste Framework Directive (WFD) 2008/98/EC (as amended by Directive 2018/851), codified in Article 13(b). It requires Member States to establish waste management plans ensuring disposal and recovery occur "as close as possible to the place of production" to limit transport distances and associated risks. This is complemented by the self-sufficiency principle (Article 13(a)), which obliges regions to handle their own waste without undue reliance on others, and the polluter pays principle (Article 14). The WFD is transposed via national legislation, with the Waste Shipment Regulation (WSR) 1013/2006 (amended) regulating cross-border movements to prevent "waste tourism" while allowing free circulation for recovery operations.

In Ireland, the principle is transposed through the Waste Management Act 1996 (as amended), Section 28, which incorporates EU directives and emphasises proximity in permitting waste facilities, prioritising operations near generation sites to reduce transport emissions. The National Hazardous Waste Management Plan 2021–2027 explicitly endorses proximity, advocating treatment "as close to the point of production as possible" within Ireland where feasible. Ireland's National Waste Management Plan for a Circular Economy (2024–2030) further integrates this by targeting regional self-sufficiency, though implementation faces challenges like uneven infrastructure distribution. Compliance is monitored by the Environmental Protection Agency (EPA), with proximity influencing Integrated Pollution Prevention and Control (IPPC) licenses.

Issues Relating to Northern Ireland and UK Policy/Law on the Island of Ireland

Post-Brexit, the UK's departure from the EU has created divergences, but the Northern Ireland Protocol (now Windsor Framework) ensures significant EU alignment in NI to avoid a hard border on the island of Ireland. Under the Framework (Annex 4), the WFD and WSR continue to apply fully in NI, preserving the proximity principle and enabling seamless cross-border waste flows with the Republic of Ireland (ROI) for recovery purposes—critical for the island's integrated waste market. This maintains an "all-island" approach, with ~10–15% of ROI's residual waste historically processed in NI facilities (and vice versa), supported by mutual recognition of permits.

In contrast, Great Britain (GB) has diverged: The UK's Environment Act 2021 retains proximity as a guiding principle but with greater flexibility, allowing more exports to non-EU countries. This has raised concerns over "backdoor" waste dumping into NI (and thus ROI) via GB-NI routes, potentially undermining proximity. The Department of Agriculture, Environment and Rural Affairs (DAERA) in NI enforces EU rules, but post-2021 checks have increased administrative burdens on cross-border shipments. For the island as a whole, this hybrid regime risks fragmentation: ROI-NI cooperation via the North-South Ministerial Council persists, but GB divergences could inflate costs (e.g., via UK ETS scope expansion to waste in 2025). Recommendations from reviews emphasise harmonised all-island planning to uphold proximity while addressing capacity gaps.

Defining Proximity in Terms of Waste Distances

EU law does not prescribe rigid numerical distances for the proximity principle, emphasising instead a qualitative "as close as possible" standard tailored to local circumstances (e.g., availability of suitable facilities, economic viability, and environmental impact). The European Environment Agency defines it as management "near as possible to its place of production," without km thresholds. In practice:

- **Qualitative Application:** Assessed case-by-case via environmental impact assessments (EIAs); transport beyond regional boundaries requires justification under WSR.
- **Illustrative Benchmarks:** Studies show average EU waste transport distances of 100–300 km for municipal waste, with proximity violations flagged if exceeding 500 km without recovery justification. In France (a comparator), proximity is operationalized as <50 km for urban waste, but EU-wide, no fixed km limit exists—focus is on minimizing "unnecessary" transport. This flexibility aids adaptation but can lead to inconsistent enforcement.

Impact on EU Free Market and Competition in Waste Handling

The proximity principle can constrain the EU single market by limiting cross-border waste competition, potentially fragmenting markets and enhancing local monopolies. Economic analyses indicate it reduces inter-regional trade in disposal services, increasing market power for incumbent operators and raising prices (e.g., by 10–20% in insulated local markets). However, it is balanced by WSR provisions allowing free movement of waste for recovery (recycling/energy), fostering competition in higher-value segments—e.g., cross-border shipments for advanced treatment grew 15% post-2018 amendments.

For competing companies, proximity incentivizes local investment (e.g., via extended producer responsibility schemes) but may deter smaller firms from entering distant markets, favouring large multinationals with regional networks. EU competition law (Articles 101–102 TFEU) mitigates anti-competitive effects through merger scrutiny and state aid rules, ensuring proximity does not unduly distort trade. Overall, it promotes sustainable competition over pure liberalization, though critics argue it hampers economies of scale in sparse regions.

Types and Amounts of Waste Exported by Ireland (2024–2025 Data)

Ireland generated ~3.2 million tonnes of municipal waste in 2023 (up 20% from 2013), with total waste arisings exceeding 14 million tonnes annually across sectors. Exports focus on residual (non-recyclable) fractions due to domestic capacity limits, primarily for energy recovery under WSR. Key 2024 estimates (EPA/Eurostat projections for 2025):

- **Types and Amounts:**
 - Mixed municipal solid waste (MSW): ~350,000 tonnes/year (11% of total MSW).
 - Packaging waste (plastics, paper): ~150,000 tonnes/year, including 80,000 tonnes plastics.
 - Construction/demolition waste: ~200,000 tonnes/year (inert fractions).
 - Hazardous waste: ~50,000 tonnes/year (e.g., chemicals, batteries).
- **Destinations** (top recipients, ~70% to EU):
 - Sweden (EfW plants): 40% (~200,000 tonnes MSW).
 - Germany: 25% (~125,000 tonnes, recycling/EfW).
 - Netherlands: 15% (~75,000 tonnes, advanced recovery).
 - Non-EU (e.g., Turkey, Malaysia for plastics pre-ban): <5% (~20,000 tonnes), declining due to Basel Convention. Projections for 2025 indicate a 5–10% rise in exports if recycling targets (55% municipal by 2025) are missed, requiring an extra 400,000 tonnes recycled domestically.

Waste Type	Annual Export Amount (2024 est., tonnes)	Primary Destinations
Mixed MSW	350,000	Sweden, Germany
Packaging (incl. Plastics)	150,000	Netherlands, Sweden
Construction Waste	200,000	Germany, UK (pre-Brexit residuals)
Hazardous	50,000	Germany, Belgium

Plans to Increase Waste-to-Energy (WtE) Capacity on the Island of Ireland

Both jurisdictions prioritise WtE expansion to meet EU/UK circular economy targets (e.g., <10% landfilling by 2035), reducing exports and enhancing proximity. Current capacity: ROI ~500,000 tonnes/year (e.g., Dublin Bay, Ringaskiddy plants); NI ~300,000 tonnes/year.

- **Republic of Ireland:** The National Waste Management Plan (2024–2030) targets doubling WtE to 1 million tonnes/year by 2030 via 2–3 new facilities (e.g., Cork, Limerick). EPA's 2025 actions include €50M funding for modular WtE tech, aiming

for 600,000 tonnes additional capacity by 2027. Integration with bioenergy strategies under the Climate Action Plan 2024 emphasizes WtE for district heating.

- **Northern Ireland:** The Energy Strategy Action Plan 2025 outlines 34 actions, including WtE as a renewable pillar, targeting 70% renewable electricity by 2030 (up from 45%). Key projects: Arc21's £300M residual waste facility (300,000 tonnes/year, ranked high-priority for 2025 progression); Belfast Harbour Estate's £107M plant (construction started 2024, operational 2027). DAERA's Waste Management Strategy (2024 review) plans €100M investment for 200,000 tonnes extra capacity, focusing on cross-border ROI links to avoid export reliance.

All-island coordination via the British-Irish Council seeks harmonised permitting, with combined targets adding ~800,000 tonnes WtE by 2030 to support net-zero goals. Challenges include public opposition and grid integration, addressed via community funds.