

Definitions of wastescapes

Definition	Author	Keywords identified
"Wastescapes are landscapes that result from a linear economy and its spatial consequences, often visible as abandoned areas and ineffectively used areas."	Wuyts & Marjanović (2023)	Abandoned areas Ineffectively used areas
"In the contemporary city, there are fragments of unused, residual, abandoned landscapes, defined as "Waste Landscapes" which are the natural consequence of the metabolic process of growth and development of cities, both for the incompatibility of their original use and for the loss of their economic value"	Della Spina & Giorno (2022)	Fragments of unused, residual, abandoned landscapes
"An urban wastescape is therefore a part of a dysfunctional urban ecosystem, i.e. a place where the built environment, society and socio-economic dynamics are determined synergistically."	Chiara Mazzarella & Remoy (2021)	Dysfunctional
"...wastescapes are considered those parts of cities not necessarily polluted—but where risk exposure is high— like ghettos, abandoned areas, and those places where social risk caused segregation"	Cerreta & Mazzarella (2021)	Abandoned areas
"Wastescapes could be defined as 'unresolved territories', and as: 'privileged places for the proliferation of degradation phenomena that affect the environment and human well-being.'"	Cerreta, Mazzarella, Spiezia, et al. (2020)	Unresolved territories
"Wastescapes have been defined as places in crisis according to their main spatial categories identified in peri-urban areas: Degraded lands; degraded water and connected areas; declining fields, settlements, and buildings in crisis; "dross" of facilities and infrastructure, the operational infrastructure of waste"	Cerreta, Mazzarella, Spiezia, et al. (2020)	Places in crisis
"Wastescapes are critical fragments of contemporary growth, excluded or disconnected from the rest of the urbanised areas, witnesses of the failure of economic processes for multiple causes. They can cause negative impacts, risks, and/or disamenities. Wastescapes are places of ongoing degenerative processes due to abandonment, pollution, and isolation that lead to ecosystem depletion, social risks, economic devaluation, and other environmental risks for human beings, flora, and fauna."	Cerreta, Mazzarella, Spiezia, et al. (2020)	Fragments excluded or disconnected Abandonment
"A wastescape is a part of the landscape that does not provide any kind of service, both natural and man-made."	Cerreta, Mazzarella, Spiezia, et al. (2020)	Does not provide any kind of service
"If we consider cities as living systems, and landscape as a cultural product, wastescapes can be defined as pathologies of urban systems, that need specific but holistic strategies to be healed."	Cerreta, Mazzarella, Spiezia, et al. (2020)	Pathologies of urban systems
"...wasted landscapes, i.e. portion of territory waiting for the activation of regeneration actions."	Iodice & De Toro (2020)	
"Wastescapes have been analyzed in the REPAiR project as "patches of landscape related to waste-cycles both by functional relations and because they are 'wasted-lands': anomalous areas inconsistent with the peri-urban metabolism that become neglected spaces."	Russo et al. (2019)	Anomalous areas Neglected spaces

“Wastescapes are also complex territories that can be defined by several characteristics which can be the result of crises dealing with certain life cycles or processes (e.g., post-industrial areas) that often includes pollution.”	Amenta & van Timmeren (2018)	Polluted
“Wasted Landscapes are discarded urban areas, mainly characterized by a bad quality of life and environmental problems, the leftovers of exhausted lifecycles of territories”	Rigillo & Lorenzo (2018)	Discarded urban areas The leftovers
“Wastescapes are defined as parts of landscapes going through a linear transition from valuable, accessible, public and natural landscapes, towards a variety of impacted areas involving wastefulness, inaccessibility, social/environmental degradation, and “decreasing natural value”	Geldermans et al. (2018)	Wastefulness Inaccessibility Degradation
“Contemporary modes of industrial production driven by economical and consumerist influences contribute to urbanization and the formation of waste landscapes – meaning actual waste (such as municipal solid waste, sewage, scrap metal, etc.), wasted places (such as abandoned and/or contaminated sites) or wasteful places (such as oversized parking lots or duplicate big-box retail venues)	Berger (2006b)	Abandoned Contaminated sites
“[Wastelands]...have very high diversity [and] large connected vacant sites are particularly outstanding habitats, ranging from pioneer stages, in heavily disturbed areas, to pre-forest stages in others”	Sukopp (1987)	Vacant sites

Definitions of wastescapes, its synonyms

Definition	Author	Keywords identified
“An industrial wasteland is an area of land significantly affected, transformed, and contaminated by industrial activities.”	Xi (2024)	Contaminated
“ Brownfields are sites that were previously built on and that are now derelict or underused.”	Navrátil et al. (2023)	Derelict Underused
“The wasted roadscapes are conceived as degraded areas located close to roads, which need sustainable strategies with particular attention to local problems related to accessibility and the inclusion of degraded areas in the planning process.”	Somma et al. (2023)	Degraded areas Inaccessibility
“ Urban landfills are plots of land where industrial waste and domestic waste generated during the urbanization process in various countries accumulate in large quantities, causing the land to lose its original use.”	Wen et al. (2023)	Land to lose its original use
“... wastelands . The latter should be considered as ruins germinated from the shrinkage or even disappearance of past land uses such as industrial, rural, infrastructural and so on, with the consequent degradation into wastelands”	Berruti & Palestino (2021)	Disappearance of past land uses
“‘ Edgelands ’ as our point of departure. This term is frequently deployed to describe waste landscapes absent of institutional programme and lacking in regulatory mechanisms”	Humphris & Rauws (2021)	Lacking in regulatory mechanisms

“Vacant, abandoned or unproductive land parcels, sometimes called “ wastelands ”, offer opportunities to create new green spaces in cities.”	Draus et al. (2020)	Vacant Abandoned Unproductive land parcels
“Contemporary spaces between ports and cities have often become a collage of wastescapes : marginal territories resulting from the current uneven growth of port cities .”	De Martino et al. (2020)	Marginal territories
“Habitats evolved in urban industrial wastelands , which we call abandoned wild landscapes , are unintentional products of abandonment and natural succession”	Hu & Lima (2019)	Abandonment
“Wastelands...to be considered as ruins germinated from the shrinkage or even death of past land uses such as industrial, rural, infrastructural and so on, with the consequent degradation into wasteland.”	Berruti & Palestino (2019)	Degradation
“In port areas there are also wastescapes that is, landscapes that do not attract, but reject, producing negative impacts on the following aspects: visual-perceptive, acoustic, hygienic-sanitary, olfactory and psychological.”	Girard & Nocca (2019)	Non attractive
“Ports are still expanding, and they still generate serious amounts of waste, while also leaving networks of left-over territories that lay in states of wastefulness: port-city wastescapes .”	Amenta & De Martino (2018)	Left-over territories Wastefulness
“Wasteland is an area which it used to be industrial produce but not be used now, such as mining wasteland, industrial factories, platform of train, dock and so on.”	Cui & Fang (2015)	Not be used
“Wastelands are not ordinary sites: large scale areas cut off from their surroundings, hosting various types of buildings, they are characterized by a strong identity (real or perceived contamination, social and economic stigma, cultural symbol, sense of insecurity, etc.).”	Laprise et al. (2014)	Areas cut off from their surroundings
“ Wastelands - An abandoned site with spontaneous vegetation (i.e. wild grown vegetation)”.	Bonthoux et al. (2014)	Abandoned site
“ Brownfields are sites that have been affected by the former uses of the site and surrounding land; are derelict and underused; may have real or perceived contamination problems; are mainly in developed urban areas; and require intervention to bring them back to beneficial use.”	CABERNET (2006)	Derelict Underused Contamination problems
“The term drosscape implies that dross, or waste, is scaped. or resurfaced/reinscribed by new human intentions.” “Drosscapes are the inevitable wasted landscapes within urbanised areas that eternally elude the overly controlled parameters and the scripted programming elements that designers are charged with creating and accommodating with their projects. “	(Berger, 2006a)	drosscape

Types of wastescapes

Types of Wastescapes	Author	Subtypes mentioned in the article	Initial code (as addressed in the paper)	Comparative coding attributes associated with the wastescape	Synthesised taxonomical categories
Former Inner city airports	(Schwarz & von Kolpinski , 2025)	“decommissioned airports as urban voids”	Wastescapes	perceived attributes to land (decommissioned)	Derelict/degraded/abandoned/underused infrastructure
Left over spaces	Qiao et al. (2025)	Residual spaces – 4 main types – locational leftover spaces (vast under developed land in the outskirts), heritage leftover spaces (abandoned industrial or commercial estates), morphological left over spaces (spaces arising out of defects such as odd shape, small size and landuse fragmentation) functional left over spaces (Spaces underneath highways, rear alleys).	Vacant lands	perceived attributes to land (residual, leftovers) Use (commercial, industrial)	Buffer zones/Interstitial spaces Or Derelict/degraded/abandoned Industrial establishments
Urban vacancy	Fu et al. (2025)	Residential vacancy, Commercial vacancy, urban vacant land.	Vacant land	Use (residential, commercial) Locale (urban)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Third spaces	Hou et al. (2025)	Informal green spaces	Third spaces	perceived attributes to land (informal)	Degraded green areas
Urban voids - fragmented and depopulated historic centres	Nicolini et al. (2025)	Degraded and abandoned areas, Residual places within blocks, over grown green areas, clear edges of dense settlements, open spaces used for improper functions like parking etc.	Urban voids	Morphology (degraded, abandoned)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Degrated green areas Or Interstitial spaces
Urban Industrial wastelands	Xi (2024)	Contaminated land Abandoned land Vacant land	Industrial lands	locale and its bearings (urban), antecedent	Derelict/degraded/abandoned Industrial establishments Or

		Neglected industrial lands Brownfields Post-industrial site Blighted communities and infrastructure Abandoned structures Polluted and contaminated soil		landuse (industrial), morphology and its condition (contaminated, abandoned, neglected, blighted)	Polluted land
Wastescapes	Soto et al. (2024)	vacant/derelict land vacant/derelict buildings/ dross from infrastructure	Vacant lands	morphology and its condition (derelict)	Vacant land Or Operational infrastructure of waste
Mining wastescapes	Khanyile (2024)	abandoned territories, underutilised areas, previously polluted industrial sites, empty lands, waste management areas, and undefined spaces in between	Vacant lands	landuse (industrial), morphology and its condition (abandoned, polluted, underutilised, undefined, empty)	Mining lands/quarries not in use
Peri urban Wastescapes	Amenta et al. (2024)	Three main categories are identified for wastescapes: 1. Extraordinary landscapes - the very high cultural, environmental and symbolic value is frequently crushed by the poverty of an image increasingly dependent on tourism marketing, without evolving to respond to the new images conveyed by settled or transiting populations. 2. Fragile landscapes vulnerability is mainly due to territorial depopulation and/or the	Peri urban landscapes	locale and its bearings (peri urban), morphology and its condition (abandoned), subjective or perceived attributes to land (high value but frozen in time, fragile and vulnerable, social stigma)	Stigma landscapes Or Spaces in the state of neglect

		abandonment of productive uses linked to the ordinary maintenance of the natural and built environment. 3. Stigma landscapes include sites of regional interest for reclamation, or territories marked by volcanic or seismic risks, where the abandonment of productive uses and the spread of urban informalities ended up reverberating malignant effects on the well-being of local communities.			
Military brownfields	Niemets et al. (2024)	barracks, military towns, airfields, training grounds, and other related premises, often including remnants of fortification systems, former military sites, including bases, arsenals, ammunition depots, fuel and lubricant storage facilities, tank training sites, landfills, and hazardous waste disposal sites	Military brownfields	Use (military)	Derelict/degraded/abandoned buildings Or Derelict/degraded/abandoned infrastructure
Wastescapes	Wuyts & Marjanović (2023)	permanent/structural abandoned buildings and sites, vacant houses	Vacant buildings and sites	morphology and its condition (abandoned, vacant)	Vacant lands with no or with dilapidated structures, suitable/unsuitable for habitable use Or Built structures in the state of neglect/poor structural quality/uninhabitable
Peri urban Coastal wastescapes	Amenta & Attademo (2023)	fragile and vulnerable territories, waste geographies, discarded urban areas, leftovers, porosities and malleable areas within the consolidated city, and constituted by abandoned spaces, underused infrastructures, and buildings.	Peri urban coastal wastescapes	locale and its bearings (peri urban, coastal), morphology and its condition (abandoned, discarded, underused, underutilised, uncultivate	Vacant lands with no or with dilapidated structures, suitable/unsuitable for habitable use Or Underutilised Agricultural land Or Derelict/degraded/abandoned Industrial establishments Or

		Fragmented landscapes and porous territories between ports and hinterlands. Former industrial territories, gated areas, and disrupted buildings Wastescape Types mapped in the study: 1. Abandoned greenhouse 2. Abandoned area 3. Abandoned industrial areas 4. Uncultivated infrastructure area 5. Underutilised area 6. Ruined buildings 7. Abandoned sport fields 8. Recycling centre 9. Abandoned historical park 10. Uncultivated lands		d), subjective or perceived attributes to land (fragile and vulnerable, fragmented, porous, leftovers)	Built structures in the state of neglect/poor structural quality/uninhabitable
Rural brownfield sites	Navrátil et al. (2023)	Post-agricultural brownfields, rural wastelands, Redundant agricultural buildings, derelict large-scale agricultural premises	Brownfields	locale and its bearings (rural), morphology and its condition (derelict, redundant), land use (agriculture)	Underutilised Agricultural land Or Built structures in the state of neglect/poor structural quality/uninhabitable Or Vacant lands
Wasted Roadscapes	Somma et al. (2023)	Three types of road wastescapes proposed are: 1. Social and cultural Wasted Roadscape (WRsc): represent those places that, due to their location, can assume socio-cultural value because they are located at strategic points and can be	Roadscapes	morphology and its condition (abandoned, contaminated, disused), subjective or perceived attributes to land (high value but frozen in time),	Defunct transport corridors Or Derelict large scale infrastructure Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use,

		reused to define projects beneficial to society. 2. Ecosystem service Wasted roadscape (WRes): are rejected places that can have intrinsic environmental value (emerged from ex-ante assessment) and can define new forms of naturalness and support the territory's ecological aspects. 3. Hub Wasted roadscape (WRhub): represent those places that, due to their morphological characteristics (emerged from analysis and evaluation before the definition of a project), assume a technical-functional value, i.e., they are those places valid for services attached to infrastructure (stations, info points, car sharing, parking lots). Dimension: D1. Social and Cultural Function System: S1. Urban General variable: U1. Urban space 1. Abandoned Port area 2. Unlawful dumps U2. Building and Settlement 1. Settlement in crisis		virtue of its existence and prevailing condition (networks of connectivity)	
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		2. Empty or occupied dwelling 3. Unlawful buildings 4. Potentially contaminated sites Dimension: D2. Environmental System: S2. Landscape General variable: L1. Soil 1. Protect area 2. Area without current destination 3. Volcanic Risk Area 4. Landslide risk area 5. Fallow areas and urban soils 6. Disused quarried 7. Unlawful quarries L2. Water 1. Contaminated water 2. Areas with high hydraulic risk 3. Closed bathing areas Dimension: D3. Service System: S3. Infrastructure General variable: T1. Road and railway network Abandoned infrastructure 2. Interstitial buffer zone 3. Abandoned bus and metro station T2. Coast area 1. 1. Abandoned port area			
Wastescapes	Angrisan o & Nocca (2023)	Empty, abandoned, or degraded spaces Unused ancient buildings, abandoned industrial areas	Wastescapes	Use (industrial) morphology and its condition (abandoned, degraded, empty)	Derelict/degraded/abandoned Cultural/heritage site Or Industrial establishments
Urban voids	Magno & Malaque (2023)	Derelict voids, infrastructure voids, underutilised public spaces, transitional voids	Urban voids	Morphology (derelict, underutilised)	Vacant plots Or Derelict/degraded/abandoned public spaces
Brownfields	Preston et al. (2023)	Predominantly impervious – dominantly urban, Impervious distributes;	Brownfields	Locale (periurban) morphology	Vacant lands

		Predominantly pervious – pervious distributed, dominantly peri urban.		(impervious)	
Wastescapes	Amenta & van Timmeren (2022)	Abandoned areas, or discarded territories, neglected areas, left over spaces, pollution, abandonment, lack of functions	Wastescapes	morphology and its condition (abandoned, discarded, neglected, polluted)	Polluted land Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Peri urban Wastescapes	Russo et al. (2019) Geldermaans et al. (2018) Geldermaans et al. (2017) Cerreta, Mazzarella, & Somma (2020) Garzilli et al. (2020)	Wastescapes layers mapped in H2020 REPAiR project: 1. Degraded lands a. Polluted soils (contaminated soil) b. Artificial soils (Mineral extraction and dumpsites) 2. Degraded water a. Degraded water bodies b. Elements linked to degraded waters (banks, shores, tanks, plants etc) c. Flooding zones 3. Declining fields a. Abandoned agricu	Peri urban Wastescapes	morphology and its condition (degraded, polluted, abandoned, unused, confiscated, neglected), virtue of its existence and prevailing condition (waterbodies, greens, fields)	Polluted land Or Degraded waterbodies Or Degraded green areas Blighted neighborhood Or Derelict/degraded/abandoned -buildings/public spaces/buffers Or Operational infrastructures of waste

		- ltural fields b. Vulne rable lands 4. Settlements and buildings in crisis a. Vacan t under used buildi ngs and settle ments b. Urban settle ments sufferi ng from fatigu e (Avera ge of the comp osite indica tors of struct ural depen dency ratio, unem ploym ent rate, lower secon dary educat ion rate, overcr owdin g, poor housin g) c. Infor mal settle ments d. Urban lots in transf			
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		ormati on tampe red e. Unaut horise d buildi ngs and settle ments f. Confis cated assets 5. Dross of facilities and infrastructures a. Negle cted dismis sed under used infrast ructur e b. Dismi ssed under used public faciliti es c. Interst itial spaces of infrast ructur e netwo rks (Road and rail associ ated land, buffer areas) 6. Operational infrastructures of waste a. Perfor ming faciliti es for waste manag			
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		ement (stora ge, treatm ent, transp ortatio n/infra , etc.) b. Storag e faciliti es c. Waste recove ry d. Incine rators e. Landfi lls f. Vehicl e disma ntling g. Sortin g h. Com munic ation i. Mobil e faciliti es j. Purifi cation k. Comp osting			
Wasted landscapes	Russo & van Timmere n (2022)	Territories in transition, Obsolete, abandoned or neglected parts, transitional landscapes, disused landfills, discarded territories	Wastesc apes	morpholog y and its condition (obsolete, abandoned, neglected, disused), subjective or perceived attributes to land (transitiona l)	Landfills Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Wasted landscapes of road infrastructures	Somma (2022)	Abandoned areas including roads interstices, abandoned subways, Three types: 1. abandoned infrastructure buffer zones (WL1);	Roadsc apes	morpholog y and its condition (abandoned , disused), virtue of its existence and prevailing	Disused or defunct transport corridors Or Buffer zones Or Underutilised Agricultural land

		2. abandoned fields and agricultural plots (WL2); 3. public or disused equipment of public use or utility (WL3).		condition (networks of connectivity) use (agriculture)	
Wastescapes	Yuan et al. (2022)	Landfills	Landfills	Use	Operational infrastructure of waste
Wastescapes	Attademo & Berruti (2022)	Abandoned, places in disuse, unauthorized, confiscated, neglected, vacant buildings and/or settlements, empty buildings to underutilized, abandoned or obsolete buildings, to informal and unauthorized settlements, to urban plots in transformation, never completed, to confiscated assets, but also to abandoned infrastructures and their interstitial spaces		morphology and its condition (abandoned, neglected, disused, unauthorized, confiscated), subjective or perceived attributes to land (informal, unauthorized)	Confiscated land Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Derelict/degraded/abandoned/underused infrastructure Or Buffers/Interstitial spaces
Waste LandScapes	Della Spina & Giorno (2022)	Fragments of unused, residual, abandoned landscapes, abandoned areas, polluted territories, interstitial areas, waiting areas, terrain vague or drosscape. Unused, abandoned urban landscape, with abandoned areas inside, brownfield areas, and unused industrial archaeological buildings.	Wastescapes	morphology and its condition (abandoned, unused), subjective or perceived attributes to land (fragmented)	Buffers/Interstitial/Residual spaces Or Drossscape Or Derelict/degraded/abandoned Cultural/heritage sites Or Brownfields
Unused railway areas	Kugl (2022)	Unused railway lands, abandoned, degraded	Railscapes	Morphology (unused, abandoned, degraded)	Derelict/degraded/abandoned infrastructure
Left over spaces	Naghbi & Faizi (2022)	Spaces in between, lots, blocks	Left over spaces		Buffer areas/Interstitial spaces
Pocket spaces	Narandžić & Ljubojević (2022)	urban pockets in the form of the courtyard, urban pockets which 'lean' on heavy or busy traffic roads, urban pockets framed by traffic routes, urban pockets in the form of passages, spaces under the bridges and urban	Pocket spaces		Vacant lots

		pockets within city blocks			
Left over spaces	Azhar et al. (2022)	At neighbourhood scale – undefined spaces, dual use spaces, transitional spaces At plot or block scale – Spaces in front and rear of the building, Spaces underneath the building, spaces on the top of the building, Spaces enclosed by building in 2-3 sides.	Left over spaces	Morphology (undefined)	Interstitial spaces
Urban brownfields	Rey et al. (2022)	Industrial brownfields (sub urban or peri urban), railway brownfields (abandoned, obsolete), Military brownfields, waterfront brownfields, Infrastructural brownfields, Transport related, agro food facilities, tertiary sector facilities, commercial brownfields, energy brownfields, other diverse derelict sites- hospital, religious, educational, Prison, recreational, speculative)	Urban Brownfields	Locale (urban, periurban, suburban) Use (industrial, infrastructure related, military)	Derelict/degraded/abandoned infrastructure Or Derelict/degraded/abandoned industrial establishments
Wastescapes	Chiara Mazzarella & Remoy (2021)	Degraded and abandoned places	Wastescapes	morphology and its condition (abandoned, degraded)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Edgelands	Humphris & Rauws (2021)	Post industrial brownfield sites, unseen, unregulated and the unplanned. Categories of unseen edgelands: 1. Distanced: sites away from any centres of civic activity. 2. Disconnected: sites with limited linkages to networks of movement as a consequence of the fragmentation of the post-	Post industrial brownfields	objective spatial attributes of land (unregulated, unplanned, unseen) use (industrial)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use

		industrial urban landscape. 3. Disguised: sites intentionally or unintentionally concealed from view. Categories of unregulated edgelands: 1. Policing: sites with absent or inconsistent police presence. 2. Surveillance: sites with absent or disrupted observational mechanisms, e.g., CCTV or casual, social surveillance. 3. Signage: sites with absent or ineffective graphic communication of regulations. 4. Barricades: sites with absent, inconsistent or ineffective use of physically obstructive mechanisms. Categories of unplanned edgelands: 1. Local planning activity: sites with periods in which formal plans for use are absent or remain unimplemented. 2. City Planning Policy: sites that are given low or poorly defined strategic priority in the realisation of long-term, city-wide policy objectives.			
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Wastescapes	Jeziorska-Biel et al. (2021)	Abandoned spaces, areas not used for any economic or social function, brownfield sites or indefinite interstitial spaces.	Wastescapes	morphology and its condition (abandoned)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Interstitial spaces
Wastescapes	Somma (2021)	Categories of abandoned areas: 1. buffer strips of the infrastructures in a state of neglect; 2. abandoned fields and agricultural plots; 3. public or disused public or public use equipment.	Wastescapes	morphology and its condition (abandoned) use (agriculture)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Infrastructure/Service zones and their buffer zones Or Underutilised Agricultural land
Wastelands	Berruti & Palestino (2021)	Disused industrial, rural, and infrastructural areas, stretches of agricultural land housing unauthorised buildings; portions of abandoned heritage sites; polluted sites under designated state tutorship; housing or productive facilities confiscated by the state from criminal organisations	Wastescapes	morphology and its condition (abandoned, disused, polluted, confiscated) use (agriculture, industrial, residential) locale and bearings (rural) objective spatial attributes of land (unauthorised)	Polluted land Or Underutilised Agricultural land Or Derelict/degraded/abandoned Industrial establishments Or Derelict/degraded/abandoned Cultural/Heritage sites
Wastescapes	Cerreta & Mazzarella (2021)	Risky areas like ghettos, social segregation spaces, contaminated soil, agricultural land housing illegal constructions, portions of abandoned historical heritages, housing or productive facilities confiscated by the government from the criminal organisations, partially condoned	Wastescapes	Use (residential, industrial) morphology and its condition (abandoned, unfinished)	Derelict/degraded/abandoned Industrial establishments Confiscated land & Disputed land Or Derelict/degraded/abandoned Cultural/Heritage sites Or Blighted neighborhood

		unauthorized building lots, estates never registered by the tax authorities, unfinished, abandoned or soon to be abandoned buildings, and areas and infrastructures designed to host marginal lives			
Brownfields	Tureckova (2021)	Brownfields based on former function and sector Brownfields based on size Brownfields based on location Brownfields based on ownership Brownfields based on contamination and ecological burden	Brownfields		Contaminated land
Vacant lands	Maldonado López et al. (2021)	Abandoned Land ii) Undeveloped Land iii) Postindustrial Land iv) Land Held for Speculation, and v) Derelict Land.	Vacant land	Morphology (derelict, undeveloped) use (industrial) subjective or perceived attributes to land (speculation)	Vacant lands
Wastelands	Draus et al. (2020)	Vacant, abandoned or unproductive land parcels	Wastescapes	morphology and its condition (abandoned,)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Wastescapes in port cities	De Martino et al. (2020)	Marginal territories, left over (lands, architectures, docks, water surfaces, infrastructures widespread along the coast, green empty areas, ex-industrial sites, abandoned port railway, historical buildings and docks), Hard and paved logistic platforms, storage areas and buildings, oversized roads (unfriendly for pedestrians and cyclist), old and vacant buildings, abandoned or underused buildings	Wastescapes	Use (port, railway, networking infrastructure related) morphology and its condition (abandoned, underused) subjective or perceived attributes to land (marginal, leftover)	Derelict/degraded/abandoned buildings Or Disused or defunct transport corridors Or Derelict/degraded/abandoned/underused infrastructure

Wasted landscapes, abandoned industrial areas	Iodice & De Toro (2020)	Categories of industrial Dismissed sites can be: 1. Contaminated; 2. Potentially contaminated; 3. Non-contaminated. Abandoned, vacant, underused, dismissed industrial, commercial, military buildings, Examples are a) brownfields; b) abandoned historic buildings (farms, houses, mills); c) building blocks with high percentages of apartments and/or offices and/or commercial premises not leased; d) agricultural products (such as greenhouses or shelters)”.	Wastescapes	Use (industrial, agriculture, commercial , military) morphology and its condition (abandoned , underused, dismissed)	Contaminated land Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Derelict/degraded/abandoned buildings
Peri urban wastescapes	Garzilli et al. (2020)	Fragile ecosystems, marginal, spatial, and figurative mosaics, contiguous abandoned, underused sites, and urban voids, latent landscapes	Peri urban wastescapes	Locale (peri urban) morphology and its condition (abandoned , underused) subjective or perceived attributes to land (marginal, fragile)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Interstitial spaces	Hugo & du Plessis (2020)	Underutilized parking spaces Roof spaces In-between spaces Neglected spaces Open plots Servitude Other or interior spaces	Interstitial spaces	Morphology (underutilised, neglected)	Interstitial spaces Or Vacant lots
Undefined lands	Naghibi et al. (2020)	Vacant lands	Vacant lands		Vacant lands
Urban voids	Hwang & Lee (2020)	Unused, underused, and misused land, abandoned buildings, vacant lots, and derelict areas	Urban voids	Morphology (unused, underused, misused, abandoned, derelict)	Vacant lands

Informal green spaces	M. Kim et al. (2020)	Vacant lots, Street edges, water edges, gaps, brownfields, unimproved lands, parking lot verges, railroad verges, overgrown structures	Informal green spaces		Degraded green areas Or Vacant lands Or Buffer zones/Interstitial gaps of infrastructure
Vacant land	Song et al. (2020)	Wild grassland, Wild grass mixed with shrub and tree land, Bare land, Abandoned building mixed with wild grassland, Abandoned building mixed with bare land, Abandoned building land	Vacant land	Morphology (abandoned)	Derelict/degraded/abandoned buildings Or Degraded green areas
Wastescapes	Dąbrowski et al. (2019)	Underused/abandoned/polluted lands typically due to former industrial activities hosted, pollution and formal/informal waste dumping, proximity of infrastructures, 'sequential patches'.	Wastescapes	Use (industrial) morphology and its condition (abandoned, underused, polluted)	Polluted and Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Urban industrial wastelands/abandoned wild landscapes	Hu & Lima (2019)	Useless, blight places without intrinsic values, unproductive, undeveloped wild brownfields	Urban industrial wastescapes	Use (industrial) subjective or perceived attributes to land (useless, wild) morphology and its condition (unproductive, undeveloped)	Blighted neighborhood Or Brownfields
Wastescapes	Cerreta & Mazzarella (2019)	Drosscape, grey areas, brown fields, fragments of abandoned sites after deindustrialization phenomena, neglected area, wasted lands, scarred and polluted lands and sites	Wastescapes	morphology and its condition (abandoned, neglected, scarred polluted) perceived attributes to land (fragmented, grey areas, wasted)	Polluted and Or Derelict/degraded/abandoned Industrial establishments Or Operational infrastructure waste

Wastelands	Berruti & Palestino (2019)	Neglected areas, neglected land, stretches of agricultural land housing unauthorized buildings; portions of abandoned historical heritage; polluted sites under designated state tutorship; housing or productive facilities confiscated by the state from the criminal organizations.	Wastescapes	morphology and its condition (neglected, scarred polluted) perceived attributes to land (negated) objective spatial attributes of land (unauthorized, confiscated) Use (residential, agriculture)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Derelict/degraded/abandoned Cultural/heritage sites Or Polluted land
Wastescapes	Nowakowska & Grodzicka-Kowalczyk (2019)	Degraded urban areas, urban farrows	Wastescapes	morphology and its condition (degraded)	Blighted neighbourhood Or Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Abandoned cultural heritage as wastescapes	Bosone et al. (2019)	Abandoned and underused cultural heritage assets	Underused cultural heritage assets	morphology and its condition (abandoned, underused)	Derelict/degraded/abandoned Cultural/heritage sites
Underutilised land	Li et al. (2019)	vacant lot, urban village, abandoned industrial land and remnant cultivated land.	Vacant lands	Locale (urban) Use (industrial)	Vacant land/lots Or Underutilised Agricultural land
Vacant land	G. Kim et al. (2018)	Post-industrial sites, derelict sites, unattended with vegetation sites, natural sites, and transportation-related sites	Vacant land	Use (industrial) morphology and its condition (derelict) By virtue of its existence and prevailing condition (natural sites),	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Degraded green areas Or Disused or defunct transport corridors

				perceived attributes to land (unattended)	
Wastescapes	Amenta & van Timmeren (2018)	Deformed landscapes, abandoned territories, underused areas, former and polluted industrial areas, bare lands, and indefinite interstitial spaces, as well as the operational landscape and infrastructure of waste (management), Neglected, wasted, and underused spaces, contaminated land, transport safety and noise areas (in the territory of the airport), contaminated waterbodies, infrastructures, abandoned buildings, land and industries, unused greenfields next to the infrastructure itself, and the operational infrastructure of waste	wastescapes	morphology and its condition (deformed, abandoned, polluted, neglected, underused, contaminated)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Degraded green areas Or Disused or defunct transport corridors Or Operational infrastructure of waste Or Polluted land Or Derelict/degraded/abandoned buildings
Urban brownfields	Mathey et al. (2018)	urban wastelands, abandoned land or derelict land	Brownfields	morphology and its condition (abandoned, derelict)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use
Port city wastescapes	Amenta & De Martino (2018)	Brownfields, the buffer zones of port infrastructures, as well as neglected buildings, abandoned spaces, marginal areas, and undefined borders, polluted lands, noise nuisance areas, underused open spaces in a waiting condition, open, residual, and interstitial spaces	Brownfields	morphology and its condition (abandoned, neglected, polluted, underused) Use (port and its infrastructure)	Buffer zones/Interstitial spaces Or Derelict/degraded/abandoned/underused infrastructure Or Degraded green areas
Wasted landscapes	Rigillo & Lorenzo (2018)	Chaotic, not-planned land use, territories in between	wastescapes	perceived attributes to land (chaotic) objective spatial attributes of	Interstitial spaces/Buffer spaces Or Vacant lands

				land (not-planned)	
Non-productive spaces	Newman & Kim (2017)	Vacant lands, abandoned structures and brownfields	Vacant lands	Morphology (abandoned)	Vacant lands
Functionally derelict areas	Lampič et al. (2017)	FDA of agricultural activities FDA of service activities FDA subtype FDA of public services FDA of business, commercial and other service activities FDA of a historical city or village centre FDA of tourist and sports activities FDA of industrial activities FDA of defence, protection and rescue services FDA of mineral extraction FDA of a mine FDA of a quarry, a sandpit FDA of a gravel extraction pit FDA of other areas of mineral extraction FDA of infrastructures FDA of transport infrastructure FDA of environmental infrastructure FDA of other public infrastructure works FDA of green infrastructure FDA of transitional use FDA for housing FDA of a disused construction site FDA of characteristic transitional use FDA for housing – unfinished residential areas FDA for housing – old, deteriorated areas	Derelict areas	Use (agriculture, commercial, industrial, residential) Morphology (derelict, deteriorated, unfinished)	Derelict/degraded/abandoned buildings Or Derelict/degraded/abandoned infrastructure
Urban interstices	(Phelps & Silva, 2017)	Interstices of proximity (parks, squares, protection buffers and restriction zones, local	Interstitial spaces	Morphology (fragmented)	Interstitial spaces/buffers

		services and infrastructure Interstices of transition (metropolitan parks, military facilities, zoos, industrial and research facilities, landfills, brownfields, green protected areas) Interstices of remoteness (national parks, topographical features such as mountains, lakes etc)			
Urban waste lands	De Giovanni et al. (2016)	Critical, derelict spaces, Abandoned industrial zones	Wastescapes	Morphology (abandoned, derelict) Use (industrial)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use Or Derelict/degraded/abandoned Industrial establishments
Wastescapes	Marin & De Meulder (2016)	Wastewater treatment plants, landfills, incinerators and recycling centres	Wastescapes	Use (infrastructure related)	Operational infrastructure of waste
Unintentional landscapes, wastelands	(Gandy, 2013, 2016)	marginal or interstitial spaces,	Wastelands	Morphology (marginal or interstitial)	Interstitial Or Vacant lands
Informal green spaces	Rupprecht & Byrne (2014)	Street verges - Roadside verges, roundabouts, tree rings, informal trails and footpaths Lots - Vacant lots, abandoned lots, Gap - Gap between walls or fences Railway - Rail tracks, verges, stations Brownfields - Landfill, post-use factory grounds, industrial park Waterside- Rivers, canals, water, reservoir edges Structural- Walls, fences, roofs, buildings, Microsite - Vegetation in cracks or holes Power line - Power line rights of way	Informal green spaces	Morphology (leftovers, abandoned)	Vacant plots Or Degraded waterbodies/green areas Or Landfills Or Disused or defunct transport corridors, buffer zones Or Derelict/degraded/abandoned/underused infrastructure
Residual urban voids	Laskari (2014)	unused, residual urban voids, unbuilt spaces within streets, passageways, urban	Urban voids	Morphology (residual, undefined)	Buffer zones/interstitial spaces Or Vacant lots

		blocks. other kinds of un-built spaces, such as lightwells, frontages, remnants from relocations of the building line, oddments from expropriations, empty lots, yards, or other undefined and disjoint residual voids.			
Vacant land	Németh & Langhorst (2014)	unused or abandoned for the longer term, including raw dirt, spontaneous vegetation and emergent ecologies, land with recently razed buildings, perimeter agricultural land fallen out of cultivation, brownfields and other contaminated sites, or land that supports long-term, abandoned derelict structures.	Vacant land	Morphology (unused, abandoned, contaminated) Use (agriculture) Objective attributes (regulatory mechanisms)	Vacant lands/plots Or Polluted land
In between spaces	Formato & Russo (2014)	Rural urban fringes, vacated and deprived lands	In between spaces	perceived attributes to land (vacated & deprived)	Vacant lands/plots Or Buffer zones/interstitial spaces
Brownfields	Novosák et al. (2013)	agricultural brownfields in the hinterland zone and brownfields with heavy environmental burden (coal mines) in the inner-city areas	Brownfields	Use ((agriculture, mining)	Mining lands Or underutilised Agricultural land
Vacant lots	Kremer et al. (2013)	Unused land (There is no apparent use of the lot; lot does not appear to be actively managed.) Private house (The lot appears to be part of a house or used as a backyard.) Commercial\industrial (The lot appears to be in use by a commercial or industrial entity.) Community garden Park (forested or paved) Tree cover in residential street Sport fields	Vacant lots	Morphology (unused)	Vacant lands/plots Or Degraded green areas Or Buffer zones/interstitial spaces

		Road, roadside pavement or sidewalk Junk yard Parking lot Non-commercial parking Other			
Post industrial landscapes	Loures & Panagopoulos (2007)	Derelict industrial areas	Post industrial landscapes	Morphology (derelict) Use (industrial)	Derelict/degraded/abandoned industrial establishments
Brownfields	Wedding & Crawford-Brown (2007)	Derelict, contaminated, vacant, underutilised, contaminated, abandoned, environmentally impaired, tax delinquent	Brownfields	Morphology (derelict, abandoned, contaminated, underutilised) Objective attributes (regulatory mechanisms -tax)	Polluted lands Or Vacant lands Or Confiscated land & Disputed land
Drossscape	Berger (2006b) Berger (2006a)	Waste landscapes, polluted industrial landscapes, declining former factory buildings, "in-between" surfaces, leftovers, brownfields, contaminated landscapes, former urban industrial-production sites, post mined landscapes, strips, lots and unbuilt or unbuildable properties, transitional landscapes such as rail road yards, vacant lots, derelict buildings, contaminated fields, smokestacks, industrial manufacturing and parking lots. Landfills, Former industrial manufacturing sites, Infrastructural corridors, abandoned and vacant urban land, abandoned and mined landscapes, toxic landscapes	Drosscape	Use (industrial) Morphology (declining, contaminated, derelict, abandoned, vacant) perceived attributes to land (toxic, left overs)	Polluted land Or Buffer spaces/Interstitial spaces Or Vacant lands/plots Or Derelict/degraded/abandoned Industrial establishments Or Mining lands
Derelict rural buildings	Zavadskas & Antucheviciene (2006)	Derelict and mismanaged rural buildings	Vacant buildings	Morphology (derelict)	Derelict/degraded/abandoned buildings

Former military sites	Bagaeen (2006)	Ex-military land, vacant and derelict	Military lands	Morphology (derelict and vacant)	Vacant lands
Wastescapes	Clément (2005)	Third Landscapes, Infrastructural buffer zones	Third landscapes	Morphology (buffer zones)	Buffer zones
Terrain Vague	Solà Morales (1995)	“Empty, unoccupied” , “free, available, unengaged”, indefinite and uncertain spaces, “Unincorporated margins, interior islands void of activity, oversights, uninhabited, unsafe, unproductive”, Industrial wastelands, vacant and derelict properties and declining suburban developments	Terrain vague	Morphology (vacant, derelict) Locale (sub urban)	Vacant lands/plots with no structures/with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use

Taxonomy of wastescapes - categorisation

1. By locale and its bearings

- Urban
- Peri urban
- Rural

2. By causal factors

- Natural factors
- Anthropogenic factors

3. By its antecedent landuse, associated spaces and prevailing condition

- Industrial
- Residential
- Commercial
- Institutional
- Public/Semi public

4. By virtue of its existence and prevailing condition

- Water body
- Green areas
- Networks of connectivity

5. By morphology and its condition

- Unused/Vacant/Underutilised
- Abandoned/Derelict
- Degraded
- Residual/Unresolved
- Fragmented/Disconnected
- Polluted

6. By objective spatial attributes of land

- Inaccessibility
- Topographical challenges
- Lack of basic services
- No regulatory mechanisms

7. By subjective or perceived attributes to land

- Social stigmas
- Cultural beliefs
- Market speculation and real estate dynamics

Final Taxonomy of wastescapes classification with codes

Classification is done based on the use and condition based on the inductive content analysis of the literature.

Table 1: Proposed taxonomy of wastescapes. Source: Author.

Main Category	Code	Category	Subcategory	Description
1. Land	1.i	Vacant lands	with no built structures, suitable for habitable use	Large plot of land which is empty/not in use
	ii		with dilapidated or abandoned or derelict or degraded structures, suitable for habitable use	
	iii		mining lands/quarries not in use	
	iv		having land morphological conditions not suitable for habitable use (gullied, ravenous, scrubland, waterlogged, marshy, saline or alkaline lands, degraded pastures or plantations, desertic, barren rocky, glacial)	
	2	Underutilised Agricultural land	-	Large plot of land with reuse potential for cropping
	3	Confiscated land & Disputed land	-	Plots of land subjected to seizure under the law by the government authorities or disputed
	4	Stigma landscapes	-	Plots of land perceived as stigmatized due to superstitious beliefs and not put in use.
	5	Polluted land	-	Plots of land contaminated due to its previously intended use involving/generating harmful chemicals/gases.
	6	Degraded waterbodies	-	Quality of waterbody is poor and not fit for use.

				Waterbody, its flood plains/banks.
	7	Degraded green areas	-	Green areas that are not in a usable condition.
2. Settlements and spaces	1	Blighted neighborhood	-	Deteriorated neighborhood/communities posing serious threats to safety, health and wellbeing of people
	2.i	Derelict/degraded/abandoned	Buildings	Built structures/areas/spaces in the state of neglect/poor structural quality/uninhabitable
	ii		Cultural/heritage site	
	iii		Streets	
	iv		Public spaces	
	v		Industrial establishments	
3. Infrastructure	1.i	Networks	Roadscapes/Railsca pes	Disused or defunct transport corridors (roads, rail tracks), under flyover spaces, left over parcels at intersections.
	ii		Infrastructure/Service zones and their buffer zones	Utility buffers: Buffer spaces along services (transmission lines, sewage or water treatment plants, gas pipelines, buffers around dump yards/landfills, communication towers, drainage canals); Industrial and hazard risk buffers: Buffers adjacent to Industrial areas, Power plants, Petroleum or gas storage Mobility buffers: Buffer spaces along expressways, highways
	2	Derelict/degraded/abandoned/under used infrastructure	-	Defunct infrastructure in large plots of land (old bus terminals, power stations etc)
	3.i	Operational infrastructure of waste	Waste recovery facilities (storage/recycling centres/incinerators)	Facility with less efficiency (handling over capacity or below capacity), poor siting or buffering, obsolete technology, spillovers
	ii		Landfills	Large tracts of land with waste accumulation (in use, abandoned, illegal) and of perceived

				negative value and health risks related to contamination, fire, smell.
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