

LEAVING CERTIFICATE · HIGHER LEVEL · SAMPLE PAPER 1 · 2027

# Climate Action and Sustainable Development

Total marks  
**300**

Duration  
**2h 30m**

Sections  
**A · B · C**

## About this document

A practice marking scheme produced by SimpleStudy to help students and teachers prepare for the Leaving Certificate examination in Climate Action and Sustainable Development.

*Not an official State Examinations Commission document.*

# Marking Scheme

This marking scheme accompanies SimpleStudy's Sample Paper 1 in Climate Action and Sustainable Development. It is intended to support candidates and teachers preparing for the Leaving Certificate examination in this subject. It is not an official State Examinations Commission document.

## General Marking Guidelines

- Accept all reasonable responses not explicitly listed in this scheme.
- Award marks for relevant content even if poorly expressed.
- Do not penalise for poor spelling or grammar unless meaning is unclear.
- Where a candidate contradicts themselves, award the lower mark.
- A named example is required where specified — no marks without one.
- For diagrams: credit accurate labelling and correctness of representation.

## Paper Structure

<b>Section A</b>	<b>60 marks</b>	There is one question in this section, answer all parts of this question.
<b>Section B</b>	<b>160 marks</b>	Answer any four questions in this section. Each question carries 40 marks.
<b>Section C</b>	<b>80 marks</b>	Answer one question in this section. Each question carries 80 marks.

## Grading Descriptors (Sections B and C)

<b>High (H)</b>	Accurate, well-developed, specific and relevant.
<b>Mid (M)</b>	Mostly accurate, some development, relevant.
<b>Low (L)</b>	Partially accurate, limited development, broadly relevant.

**Section A****60 marks**

There is one question in this section, answer **all** parts of this question.

**Question 1 (60 marks) — Answer ALL parts**

(a) Name **three** examples of renewable energy. (12 marks)

*Award 4 marks per correct example × 3 = 12 marks. Accept any scientifically valid renewable energy source.*

Part	Acceptable Answer(s)	Marks
1	Solar / Photovoltaic (PV) energy	4
2	Wind energy	4
3	Any ONE of:  • Hydropower • Tidal • Wave • Geothermal • Biomass • Biogas • Green Hydrogen	4

(b) Carbon Sequestration — Figure 1. (8 marks)

*Figure 1 shows CO<sub>2</sub> captured from a power plant and injected via a well to a depth of 700–3,000 m, where it is stored beneath a caprock. This is geological (subsurface) CCS.*

Part	Acceptable Answer(s)	Marks
(b)(i) 4 marks	<b>Geological</b>  The diagram shows CO <sub>2</sub> injected deep underground and stored beneath impermeable caprock — the defining feature of geological/subsurface carbon capture and storage (CCS). Biological sequestration (e.g. photosynthesis by plants/forests) involves living organisms and does not appear in the diagram.	4
(b)(ii) 4 marks	Any ONE named operational geological CCS site, e.g.:  • Sleipner gas field, Norway (first commercial offshore CCS project) • Boundary Dam CCS, Saskatchewan, Canada • Quest CCS project, Alberta, Canada • Gorgon CCS project, Western Australia • Drax power station CCS pilot, UK  Accept any other named operational geological CCS facility.	4

(c) Doughnut Economics — Figure 2. (12 marks)

Part	Acceptable Answer(s)	Marks
(c)(i) 4 marks	<p>Accept any response conveying the idea that the physical world has limits or boundaries that must not be exceeded. Acceptable phrasings include:</p> <ul style="list-style-type: none"><li>• Planetary Boundaries (the concept that Earth's systems have safe operating limits)</li><li>• Ecological limits / ecological ceiling</li><li>• Finite natural resources / limits of the natural world</li><li>• Sustainability limits / environmental limits</li><li>• Safe operating space for humanity</li></ul> <p>Do not require the precise term <i>Planetary Boundaries</i> — reward the underlying concept if clearly expressed.</p>	4
(c)(ii) Positive 4 marks	<p>Any ONE valid positive aspect. A brief, clearly expressed point is sufficient for full marks — extended development is not required in Section A.</p> <ul style="list-style-type: none"><li>• Provides a holistic framework integrating both social and ecological goals in a single model.</li><li>• Moves beyond GDP as the sole measure of progress, recognising wellbeing and equity.</li><li>• Explicitly identifies social foundations (housing, health, education, gender equality) as equally important as ecological limits.</li><li>• Encourages circular and regenerative economic models.</li><li>• Practical planning tool for cities — e.g. Amsterdam adopted the doughnut model for post-COVID recovery policy.</li></ul>	4
(c)(ii) Negative 4 marks	<p>Any ONE valid negative aspect. A brief, clearly expressed point is sufficient for full marks.</p> <ul style="list-style-type: none"><li>• Difficult to quantify all planetary boundaries precisely; some remain contested among scientists.</li><li>• Boundaries may vary by region, making universal global application complex.</li><li>• The model does not specify mechanisms or policies for achieving its goals.</li><li>• Contested by economists who argue that economic growth is necessary for funding development.</li><li>• Lacks legally binding enforcement mechanisms.</li></ul>	4

(d) Match the terms — Advocacy and Activism. (12 marks)

4 marks per correct match × 3 = 12 marks. Boycott is pre-completed on the question paper and carries no marks.

Part	Acceptable Answer(s)	Marks
<b>Lobbying</b>	A form of advocacy that seeks to directly influence government action — e.g. organised meetings with politicians, submissions to Oireachtas committees, or funded campaigns targeting policy-makers.	<b>4</b>
<b>Trade union organising</b>	Representing and protecting the rights and interests of workers — e.g. negotiating pay, conditions, and job security on behalf of members.	<b>4</b>
<b>Civil disobedience</b>	The deliberate, non-violent refusal of citizens to obey certain laws or government demands as a form of protest — e.g. sit-ins, blockades, or refusing to pay a tax.	<b>4</b>

(e) Natural factors influencing Earth's climate. (8 marks)

Both must be correct to receive full marks (4 marks each). Land-use change and burning fossil fuels are anthropogenic — do **NOT** accept.

Part	Acceptable Answer(s)	Marks
<b>Correct ×2</b>	<b>Slow changes in the Earth's orbit (Milankovitch cycles)</b> <b>Volcanic activity</b>  Milankovitch cycles (variations in eccentricity, axial tilt, and precession) alter the distribution and intensity of solar radiation reaching Earth over tens of thousands of years. Volcanic eruptions emit CO <sub>2</sub> and sulphur dioxide aerosols that can cause both short-term cooling and, over geological time, warming.	<b>4 + 4</b>

(f) Invasive species in Ireland. (4 marks)

2 marks for a correct named example + 2 marks for a clear explanation of its biodiversity impact. Both must be present for full marks.

Part	Acceptable Answer(s)	Marks
<b>Example</b> <b>2 marks</b>	<p>Accept any scientifically valid invasive species present in Ireland. Examples include:</p> <ul style="list-style-type: none"><li>• Japanese Knotweed</li><li>• Grey Squirrel</li><li>• American Mink</li><li>• Himalayan Balsam</li><li>• Rhododendron ponticum</li><li>• Signal Crayfish</li><li>• Zebra Mussel</li><li>• Three-cornered Leek</li></ul> <p>This list is not exhaustive — award marks for any valid example with an appropriate Irish context.</p>	<b>2</b>
<b>Impact</b> <b>2 marks</b>	<p>Appropriate explanation for the chosen species, e.g.:</p> <p><b>Rhododendron ponticum:</b> Forms dense impenetrable thickets that block light, preventing native plants from growing, thereby reducing habitat for native insects and birds.</p> <p><b>Grey Squirrel:</b> Outcompetes the native red squirrel for food and habitat; also carries and spreads squirrelpox virus, to which the red squirrel has no immunity.</p> <p><b>Zebra Mussel:</b> Clogs waterways and water intake pipes, disrupts aquatic food chains, and filter-feeds so intensively that it out-competes native mussel species.</p> <p><b>American Mink:</b> Predates ground-nesting birds, waterfowl, and native water voles, reducing populations of these species significantly.</p>	<b>2</b>

(g) Tipping Points — Figure 3. (8 marks)

Part	Acceptable Answer(s)	Marks
(g)(i) 4 marks	Any ONE of the cryosphere examples shown in Figure 3: <ul style="list-style-type: none"><li>• Greenland ice sheet (labelled <b>B</b>)</li><li>• West Antarctic ice sheet (labelled <b>C</b>)</li><li>• Permafrost (labelled <b>D</b>)</li></ul>	4
(g)(ii) 4 marks	Any ONE clearly developed impact on the biosphere, e.g.: <ul style="list-style-type: none"><li>• Mass extinction of species that depend on coral reef or rainforest ecosystems for food and habitat.</li><li>• Collapse of food webs and dramatic loss of biodiversity as key species are lost.</li><li>• Release of stored carbon from dying rainforests or thawing permafrost, accelerating further warming in a positive feedback loop.</li><li>• Loss of oxygen production from tropical rainforests (sometimes called the <i>lungs of the Earth</i>).</li><li>• Bleaching and death of coral removes habitat for an estimated 25% of all marine species, threatening marine food chains.</li><li>• Disruption of regional and global rainfall patterns caused by forest loss, leading to wider ecosystem collapse.</li></ul>	4

(h) Mean Sea Level Change — Figure 4. (8 marks)

Read directly from Figure 4. Accept  $\pm 1$  year for (h)(i) based on the visual scale of the graph.

Part	Acceptable Answer(s)	Marks
(h)(i) 4 marks	<b>2015</b>  The graph line first crosses the 80 mm threshold in approximately 2015. Accept 2014 or 2016 given graph scale.	4
(h)(ii) 4 marks	<b>Counting rule:</b> A “counter to the overall trend” means a year where the sea-level value is lower than the previous year’s value (i.e. a year-on-year decrease against the general upward trend).  Reading Figure 4, there are approximately <b>3</b> such occurrences (around 2010–11, 2016–17, and 2017–18). However, because this depends on visual graph-reading, accept <b>2 or 3</b> where the candidate demonstrates they have applied the correct counting principle.  Award full marks for a correct method even if the count differs slightly due to graph scale.	4

(i) Misinformation or Disinformation? (12 marks)

4 marks per correct classification × 3 = 12 marks. **Key distinction:** intentional deception = Disinformation; unintentional spread of falsehood = Misinformation.

Part	Acceptable Answer(s)	Marks
<b>Fossil fuel companies concealing warming data</b>	<p><b>Primary answer: Disinformation</b></p> <p>The scenario describes deliberate concealment — companies knew the science but misled the public. This is the expected answer.</p> <p><i>Also accept:</i> Misinformation — if a candidate argues that the companies may not have intended public harm, or that lower-level employees spread the information in good faith, award full marks provided the classification is clearly justified. Award marks for quality of reasoning, not the label alone.</p>	<b>4</b>
<b>Financial institutions greenwashing</b>	<p><b>Primary answer: Disinformation</b></p> <p>Financial institutions knowingly marketing fossil-fuel-linked lending as “green” are intentionally presenting misleading information — the deception is deliberate and commercially motivated.</p> <p><i>Also accept:</i> Misinformation — if a candidate argues the institutions may genuinely believe their investments are sustainable, or that the misleading framing arises from a lack of agreed standards rather than deliberate intent, award full marks provided the classification is clearly justified.</p>	<b>4</b>
<b>Social media opinions on future impacts only</b>	<p><b>Primary answer: Misinformation</b></p> <p>Those sharing these posts likely hold the mistaken belief genuinely rather than intending to deceive — this is the expected classification.</p> <p><i>Also accept:</i> Disinformation — if a candidate argues that some social media actors deliberately spread this claim knowing it to be false (e.g. coordinated influence campaigns), award full marks provided the reasoning is clearly justified.</p>	<b>4</b>

**(j) Innovative Community in Ireland. (8 marks)**

4 marks for naming a valid innovative Irish community + 4 marks for a relevant and specific climate adaptation effect. Accept any case study from the CASD course.

Part	Acceptable Answer(s)	Marks
<b>(j)(i)</b> <b>4 marks</b>	<p>Any ONE named innovative community studied in the CASD course, e.g.:</p> <ul style="list-style-type: none"><li>• Cloughjordan Ecovillage, Co. Tipperary</li><li>• Westport, Co. Mayo (coastal flood adaptation)</li><li>• LAWPRO catchment community partnerships</li><li>• Leitrim community peatland restoration project</li><li>• Inis Meáin (island community adaptation)</li><li>• Any other valid named Irish community studied as part of the CASD course.</li></ul> <p>Do not restrict to the examples listed — any Irish community that worked collectively to adapt to climate change is acceptable.</p>	<b>4</b>
<b>(j)(ii)</b> <b>4 marks</b>	<p>The effect must be appropriate to the community named. Award marks for any reasonable climate adaptation effect relevant to the chosen community, e.g.:</p> <p><b>Cloughjordan:</b> Adapting to energy insecurity and fossil fuel dependence through a community energy co-operative, district heating system, and sustainable low-carbon housing development.</p> <p><b>Coastal community (e.g. Westport):</b> Adapting to increased flood risk and coastal erosion caused by more frequent storm events through managed realignment, sea walls, and/or early warning systems.</p> <p><b>Peatland community:</b> Adapting to carbon release from degraded bogs through rewetting and restoration, also protecting local water quality.</p>	<b>4</b>

Answer any **four** questions in this section. Each question carries 40 marks. Candidates answer all parts of whichever four questions they choose.

### Question 2 — The Carbon Cycle, Ecosystems and Earth Systems (40 marks)

(a) Labelled diagram of the carbon cycle. (10 marks)

*Award marks for a diagram that correctly illustrates and labels each of the four required elements. The diagram need not be artistically perfect; accuracy of representation and correct labelling are assessed.*

Required Element	Acceptable Answer(s)	Marks
<b>Photosynthesis</b>	Arrow from atmosphere ( $\text{CO}_2$ ) to plants/vegetation, labelled "Photosynthesis" or equivalent. Indicates removal of $\text{CO}_2$ from atmosphere by plants.	<b>2</b>
<b>Respiration</b>	Arrow from living organisms (plants/animals) back to atmosphere, labelled "Respiration". Indicates release of $\text{CO}_2$ by organisms.	<b>2</b>
<b>Burning fossil fuels</b>	Arrow from fossil fuels/underground deposits to atmosphere, labelled "Burning fossil fuels" or "Combustion". Indicates release of stored carbon as $\text{CO}_2$ .	<b>3</b>
<b>Dead organisms</b>	Dead organisms shown decomposing into soil and/or, over geological time, becoming fossil fuels. May be shown with a decomposition arrow or label.	<b>3</b>

**(b)** Two actions to protect or improve a named local ecosystem. (10 marks — 5 per action)

Candidate must name a specific ecosystem. Award 2 marks for clearly naming the action + 3 marks for explaining the problem the action addresses. Example ecosystems: bog/peatland, coastal dune system, river/lake, native woodland, hedgerow network.

Part	Acceptable Answer(s)	Marks
<b>Action 1</b> 5 marks	<b>e.g. Removal of invasive <i>Rhododendron ponticum</i> from native woodland.</b>  <i>Problem addressed:</i> <i>Rhododendron</i> forms dense thickets that block light to the forest floor, preventing native plants from regenerating and reducing biodiversity of native insects, birds and other wildlife.	<b>2 + 3</b>
<b>Action 2</b> 5 marks	<b>e.g. Rewetting of a drained bog/peatland (blocking drainage channels).</b>  <i>Problem addressed:</i> Drainage destroys the anaerobic waterlogged conditions that peat depends on, releasing stored carbon as CO <sub>2</sub> and CH <sub>4</sub> , and eliminating the specialist bog habitat that supports unique plant and animal communities (e.g. sundew, bog cotton, curlew).	<b>2 + 3</b>

**(c)** Describe any ONE Earth system. (10 marks)

**Mark split (4 + 4 + 2):** 4 marks for accurate description of the system's components; 4 marks for explaining processes and interactions with other Earth systems; 2 marks for a relevant named example. Candidate selects ONE system from: Biosphere, Cryosphere, Hydrosphere, Geosphere, Atmosphere.

System	Key Content for Full Marks
<b>Biosphere</b>	<b>Components (4):</b> All living organisms — plants, animals, fungi, bacteria, microorganisms.  <b>Processes (4):</b> Exchanges O <sub>2</sub> /CO <sub>2</sub> with atmosphere; cycles nutrients with geosphere; transpiration links to hydrosphere.  <b>Example (2):</b> Tropical rainforests — regulate climate via evapotranspiration and carbon sequestration.
<b>Cryosphere</b>	<b>Components (4):</b> All frozen water — ice sheets, glaciers, sea ice, permafrost, snow cover.  <b>Processes (4):</b> High albedo reflects solar radiation; stores ~70% of Earth's freshwater; melting raises sea levels.  <b>Example (2):</b> Greenland ice sheet loss / permafrost thaw releasing methane.
<b>Hydrosphere</b>	<b>Components (4):</b> All water — oceans, rivers, lakes, groundwater, atmospheric vapour.  <b>Processes (4):</b> Ocean currents distribute heat (e.g. AMOC); oceans absorb ~30% of CO <sub>2</sub> ; water cycle drives weather.  <b>Example (2):</b> AMOC weakening threatening European climate stability.

System	Key Content for Full Marks
<b>Geosphere</b>	<p><b>Components (4):</b> Solid Earth — lithosphere, mantle, core; rocks, soils, minerals.</p> <p><b>Processes (4):</b> Volcanic eruptions release CO<sub>2</sub>; rock weathering sequesters carbon; plate tectonics shapes climate over geological time.</p> <p><b>Example (2):</b> Volcanic eruptions (e.g. Pinatubo, 1991) causing temporary global cooling via aerosols.</p>
<b>Atmosphere</b>	<p><b>Components (4):</b> Gases surrounding Earth — N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, water vapour, methane, ozone.</p> <p><b>Processes (4):</b> Greenhouse effect traps heat; ozone absorbs UV; circulation distributes energy globally.</p> <p><b>Example (2):</b> Rising CO<sub>2</sub> from fossil fuels enhancing greenhouse effect and driving warming.</p>

**(d) Historical testimony demonstrating human-induced global warming. (10 marks)**

4 marks for citing specific named testimony/evidence + 4 marks for clearly linking it to human causation of warming + 2 marks for analytical comment. Accept a broad range of historical evidence — named scientists, scientific reports, observational records, and data-based evidence are all valid. Do not require named individuals if the candidate cites credible historical evidence clearly linked to human-induced warming.

Source	Key Content
<b>Eunice Newton Foote (1856)</b>	Demonstrated experimentally that CO <sub>2</sub> traps heat more than other gases — early scientific evidence that CO <sub>2</sub> concentration affects temperature.
<b>Svante Arrhenius (1896)</b>	Calculated that doubling atmospheric CO <sub>2</sub> from burning fossil fuels would raise global temperatures significantly — first quantitative link between fossil fuel combustion and warming.
<b>Charles David Keeling / Keeling Curve (1958 onwards)</b>	Direct, continuous measurements at Mauna Loa showing steadily rising atmospheric CO <sub>2</sub> since industrialisation — definitive observational record of human-driven CO <sub>2</sub> increase.
<b>James Hansen, US Congress testimony (1988)</b>	NASA scientist stated to the US Senate with high confidence that global warming was underway and linked to human greenhouse gas emissions — brought climate science into mainstream political debate.
<b>IPCC First Assessment Report (1990)</b>	Concluded that human activities are substantially increasing concentrations of greenhouse gases, enhancing the natural greenhouse effect and causing additional warming — scientific consensus formally established.

Source	Key Content
<b>Exxon internal documents (1970s–80s)</b>	ExxonMobil's own scientists modelled future climate change accurately, predicting warming from fossil fuel use. These findings were concealed from the public — powerful evidence of both the science and its suppression.
<b>Ice core / proxy records</b>	Historical CO <sub>2</sub> and temperature records from ice cores (e.g. Vostok, EPICA) show clear correlation between CO <sub>2</sub> levels and global temperature over hundreds of thousands of years; post-industrial spike is unprecedented in the record.
<b>Direct temperature records (late 19th century onwards)</b>	Global surface temperature records show a clear warming trend coinciding with industrialisation and rising fossil fuel use. Met Éireann records and global datasets (NASA GISS, HadCRUT) document this trend historically.

### Question 3 — Environment, Justice and Values (40 marks)

(a) Define extractivism. (6 marks)

*2 marks for a basic definition; up to 4 additional marks for development and contextualisation.*

Part	Acceptable Answer(s)	Marks
6 marks	<p><b>Definition (2 marks):</b> The large-scale extraction of natural resources — such as minerals, oil, gas, timber, or agricultural products — from the earth, primarily for export or commercial sale.</p> <p><b>Development (up to 4 marks):</b> Typically associated with mining, oil and gas extraction, logging, and industrial monoculture agriculture. Extractivism is often critiqued because the benefits (profit, economic growth) flow primarily to external or corporate interests, while local communities bear the environmental and social costs (pollution, land loss, displacement). Associated with Global South contexts and with colonial and neo-colonial economic relationships.</p> <p><i>Accept a neutral definition followed by any relevant development. Do not penalise a candidate who defines extractivism without the critical dimension if their definition is factually correct.</i></p>	6

(b) Describe one example of environmental racism. (10 marks)

*Must describe a specific named example studied. Award: 2 marks for naming the example + 4 marks for describing the injustice/racism + 4 marks for explaining consequences/impacts.*

Example	Key Content
<b>Cancer Alley, Louisiana, USA</b>	An 85-mile stretch along the Mississippi River between Baton Rouge and New Orleans containing over 150 petrochemical plants. The communities most exposed are disproportionately Black and low-income. Residents face cancer rates far above the national average. Permit decisions have historically prioritised industrial development over community health.
<b>Ogoni People, Nigeria</b>	Oil extraction by Shell in Ogoniland since the 1950s has caused widespread oil spills, gas flaring, and contamination of farmland and fishing waters. The indigenous Ogoni community, already marginalised, suffered loss of livelihoods and health impacts. Protests by Ken Saro-Wiwa and MOSOP were met with military force; Saro-Wiwa was executed in 1995.
<b>Standing Rock, USA</b>	The proposed Dakota Access Pipeline was routed through or near the Standing Rock Sioux reservation, threatening sacred lands and the Missouri River water supply. The pipeline had previously been rerouted away from a predominantly white city. Protests by indigenous water protectors were suppressed with police force.
<b>Flint Water Crisis, USA</b>	In 2014–2016, the majority Black city of Flint, Michigan, was switched to a contaminated water source without adequate treatment. Lead leached into pipes, causing elevated lead levels in children. The state delayed responding to community concerns, demonstrating environmental racism in decision-making and crisis response.

Example	Key Content
<b>Agbogbloshie, Ghana</b>	A major e-waste dump site near Accra where electronic waste from wealthy countries (including EU and US) is informally processed. Workers — predominantly young men from poor communities — are exposed to toxic materials (lead, mercury, cadmium) with severe health consequences.

(c) Explain two arguments for the rights of nature. (10 marks — 5 per argument)

Accept any two well-developed arguments. Other valid arguments include: indigenous worldviews recognising nature as a subject rather than object; ecocentric philosophy; precautionary principle.

Part	Acceptable Answer(s)	Marks
<b>Argument 1</b> <b>5 marks</b>	<p><b>Intrinsic value argument:</b> Nature has inherent worth that is independent of its usefulness to humans. Ecosystems, species, and natural processes have a right to exist, regenerate, and flourish in their own right.</p> <p>This has been recognised legally — e.g. Ecuador's 2008 constitution granted rights to <i>Pachamama</i> (Mother Earth); in 2017 New Zealand granted the Whanganui River legal personhood as an ancestor of the Maori people.</p>	<b>5</b>
<b>Argument 2</b> <b>5 marks</b>	<p><b>Interdependence argument:</b> Human rights (to food, water, health, shelter, life) cannot be fully realised without healthy, functioning ecosystems. Giving legal rights to nature protects the ecological systems on which all human life depends.</p> <p>Rights of nature therefore support intergenerational justice — protecting ecosystems for future generations who cannot currently advocate for themselves. The UN recognised the right to a clean, healthy and sustainable environment in 2022.</p>	<b>5</b>

**(d)** How people's values relating to nature can change over time. (14 marks)

Must refer to a specific group studied. Award: 4 marks for identifying the group + 4 marks for explaining how values changed + 4 marks for explaining why values changed + 2 marks for examples or evidence. Accept any group from the CASD course.

Part	Acceptable Answer(s)	Marks
14 marks	<p><b>Example 1 — Irish farmers transitioning to agri-environment schemes:</b></p> <p><i>Values shifted</i> from viewing land purely as a productive resource to be maximised, to seeing it as an ecosystem to be stewarded for biodiversity and long-term soil health.</p> <p><i>Drivers of change:</i> EU Common Agricultural Policy (CAP) reforms; introduction of Ireland's ACRES (Agri-Climate Rural Environment Scheme); growing scientific evidence of soil degradation, biodiversity loss, and water quality deterioration from intensive farming.</p> <p><i>Evidence:</i> Uptake of ACRES (over 50,000 farmers applied in 2023); participation in organic certification schemes.</p> <p><b>Example 2 — Young people influenced by the global climate movement:</b></p> <p><i>Values shifted</i> from relative indifference or passive concern to active environmental stewardship and civic participation.</p> <p><i>Drivers of change:</i> Fridays for Future movement (sparked by Greta Thunberg, 2018); increased media coverage of climate impacts; school curriculum changes including introduction of CASD subject; personal experience of extreme weather.</p> <p><i>Evidence:</i> Growth in youth climate activism in Ireland; opinion polls showing young people's heightened concern.</p>	14

## Question 4 — Communication, Media and Climate Action (40 marks)

(a) One way to ensure no barriers to participation in a dialogue. (8 marks)

*Must describe ONE specific strategy. Award 4 marks for describing the barrier addressed + 4 marks for the specific action taken to address it. Responses should be grounded in a real or hypothetical dialogue the candidate facilitated.*

Part	Acceptable Answer(s)	Marks
<b>8 marks</b>	<p>Valid approaches include (each with barrier identified + action described):</p> <ul style="list-style-type: none"> <li>• <b>Language barrier:</b> Providing translated materials or a translator; using plain accessible language free of jargon.</li> <li>• <b>Physical accessibility barrier:</b> Holding the event in a wheelchair-accessible venue; providing hearing loops; using large-print materials.</li> <li>• <b>Time / caring barrier:</b> Scheduling meetings at times that allow participation by people with caring responsibilities; offering childcare.</li> <li>• <b>Social / power barrier:</b> Using anonymous input methods (e.g. written cards, Mentimeter) so participants feel safe contributing without fear of judgement.</li> <li>• <b>Digital barrier:</b> Offering a hybrid or in-person alternative to online-only formats; providing devices or data for those without digital access.</li> <li>• <b>Cultural / representation barrier:</b> Actively recruiting and including diverse community members including minority groups in planning stages.</li> </ul>	<b>8</b>

**(b) Types of media — one example of each. (6 marks — 2 per correct example)**

<b>Part</b>	<b>Acceptable Answer(s)</b>	<b>Marks</b>
<b>(i) Broadcast 2 marks</b>	Any ONE named broadcast media outlet, e.g.:  RTÉ One / RTÉ Two / BBC / Virgin Media One / TG4 / RTÉ Radio 1 / Newstalk / Today FM / any named television or radio station.	<b>2</b>
<b>(ii) Print 2 marks</b>	Any ONE named print media outlet, e.g.:  The Irish Times / Irish Independent / Irish Examiner / The Guardian / Sunday Business Post / Sunday Independent / any named newspaper or magazine.	<b>2</b>
<b>(iii) Social 2 marks</b>	Any ONE named social media platform, e.g.:  Twitter / X / Instagram / TikTok / Facebook / YouTube / LinkedIn / Reddit / Snapchat / Threads.	<b>2</b>

**(c) Climate justice issue — media coverage and worldview. (12 marks)**

*(c)(i): 2 marks for naming a valid climate justice issue. (c)(ii): 2 marks for naming the outlet + 8 marks for examining how its worldview influenced reporting. Award high marks for nuanced analysis with specific examples of framing, language, sources cited, and solutions proposed.*

<b>Part</b>	<b>Acceptable Answer(s)</b>	<b>Marks</b>
<b>(c)(i) 2 marks</b>	Any valid climate justice issue studied, e.g.:  <ul style="list-style-type: none"><li>• Loss and Damage Fund for vulnerable nations</li><li>• Climate impacts on Pacific Island nations (e.g. Tuvalu, Kiribati)</li><li>• Fossil fuel industry disinformation campaigns</li><li>• Climate refugees and displacement</li><li>• Just transition for fossil fuel workers</li><li>• Food insecurity in the Global South due to climate change</li><li>• Indigenous land rights and climate</li></ul>	<b>2</b>

Part	Acceptable Answer(s)	Marks
(c)(ii) 10 marks	<p><b>Example response (for guidance):</b></p> <p><i>Issue:</i> Loss and Damage Fund. <i>Outlet:</i> The Irish Times (progressive, public interest orientation).</p> <p><b>Worldview analysis:</b> The Irish Times framed loss and damage as a moral obligation of wealthy nations to vulnerable countries. It centred the voices of Global South negotiators and civil society groups. Language used was empathetic — “climate justice”, “historical responsibility”.</p> <p>In contrast, a market-oriented outlet might frame the same issue as a financial liability or geopolitical dispute.</p> <p>High-scoring answers will identify the outlet’s ideological orientation and provide specific examples of how this shaped coverage (language, sources, headline framing, proposed solutions).</p>	10

(d) Public information campaign — two reasons for urgent climate action. (14 marks — 7 per reason)

Candidates choose TWO reasons. Award 3 marks for clearly stating the reason + 4 marks for justifying why it should be communicated to the public (relevance, urgency, public impact).

Part	Acceptable Answer(s)	Marks
<b>Reason 1</b> 7 marks	<p>Valid reasons include (each justified for inclusion in a campaign):</p> <ul style="list-style-type: none"> <li>• Sea level rise threatening Irish coastal communities and infrastructure</li> <li>• Increasing frequency and severity of extreme weather events (storms, flooding, heatwaves)</li> <li>• Biodiversity loss and ecosystem collapse threatening food systems and livelihoods</li> <li>• Health impacts of air pollution and heat — increased mortality, respiratory illness</li> <li>• Food security threats to Ireland and globally</li> <li>• Climate-driven displacement and migration creating humanitarian crises</li> <li>• Irreversibility of impacts beyond tipping points — urgency of acting now</li> <li>• Intergenerational injustice — today’s decisions affect future generations</li> </ul>	3 + 4
<b>Reason 2</b> 7 marks	A second distinct reason from the list above, with separate justification for campaign inclusion.	3 + 4

## Question 5 — Public Attitudes, Policy and International Commitments (40 marks)

(a) Figure 5 — Climate Change Beliefs and Attitudes of the Irish People.

(a)(i) One reason why scientists are considered a trustworthy source. (4 marks)

Part	Acceptable Answer(s)	Marks
4 marks	<p>Any ONE well-developed reason, e.g.:</p> <ul style="list-style-type: none"> <li>• Scientists use peer review — findings are independently verified by other experts before publication, reducing the risk of error or bias.</li> <li>• Scientific conclusions are based on empirical evidence and data collected through systematic observation and controlled experiments.</li> <li>• Findings are replicated by independent research teams, increasing confidence in results.</li> <li>• Scientists have specialist training and expertise in their field — years of education and research experience.</li> <li>• Scientific consensus (as represented by bodies such as the IPCC) provides collective credibility that goes beyond any individual claim.</li> </ul>	4

(a)(ii) Do the Figure 5 statistics suggest misinformation/disinformation has influenced Irish public beliefs? (6 marks)

Part	Acceptable Answer(s)	Marks
6 marks	<p>Award 3 marks for a clear interpretation of the statistics + 3 marks for supporting reasoning.</p> <p><b>Primary interpretation (suggested):</b> The very high percentages — 96% believe climate change is happening; 88% say it is affecting Irish weather; 85% are worried — suggest that misinformation and disinformation have <b>NOT</b> significantly influenced mainstream Irish public belief. Acceptance of climate science is very high.</p> <p><b>Alternative viewpoint (also acceptable if well-argued):</b> The 4–15% who do not believe, are not worried, or are uncertain may reflect some influence of misinformation or disinformation campaigns on a minority of the public.</p> <p>Candidates may also argue that despite high belief levels, action may still be lacking, suggesting other barriers.</p>	6

(a)(iii) Are infographics an effective way to communicate research results? (6 marks)

Part	Acceptable Answer(s)	Marks
6 marks	<p>Award 3 marks for a clear stance (yes / no / it depends) + 3 marks for justification with reasoning.</p> <p><b>YES arguments:</b> Infographics simplify complex data for non-specialist audiences; visual formats increase engagement and information recall; accessible to audiences without scientific literacy; shareable on social media, broadening reach; effective for communicating key statistics quickly.</p> <p><b>NO arguments:</b> Risk of oversimplification and loss of important nuance and statistical context; selective presentation of data can mislead; may reduce complex scientific uncertainty to apparent certainties; audiences may not understand what the visualisation is actually measuring.</p>	6

(b) Two ways climate change is contributing to biodiversity loss. (8 marks — 4 per way)

Part	Acceptable Answer(s)	Marks
Way 1 4 marks	<p><b>Temperature-driven habitat loss and species mismatch:</b></p> <p>Rising temperatures are shifting viable habitats poleward and to higher altitudes faster than many species can migrate or adapt, leading to local extinctions. Ocean warming causes coral bleaching — prolonged heat stress causes corals to expel their symbiotic algae, turning white and often dying. Phenological mismatch occurs when species' life cycles fall out of sync (e.g. flowers blooming before their pollinators emerge), disrupting ecological relationships.</p>	4
Way 2 4 marks	<p><b>Ocean acidification and extreme events:</b></p> <p>As oceans absorb ~30% of anthropogenic CO<sub>2</sub>, seawater becomes more acidic. This dissolves the calcium carbonate shells and skeletons of molluscs, crustaceans, and corals, threatening marine food webs from the base up. Sea-level rise inundates coastal and wetland habitats (salt marshes, mangroves), destroying breeding grounds for many species. More frequent and intense extreme weather events — wildfires, floods, droughts — directly destroy habitats and kill wildlife.</p>	4

(c) How international COP commitments impacted a specific Irish national policy. (8 marks)

2 marks for naming a specific COP or international agreement + 2 marks for naming a specific Irish policy + 4 marks for describing the link. The link need not be direct — accept general or multi-stage linkages (e.g. Paris Agreement shaped national targets which informed the policy). Do not require exact or sole causation. Award marks where a plausible connection between the international commitment and the national policy is clearly described.

Part	Acceptable Answer(s)	Marks
8 marks	<p><b>Example 1:</b> COP26 (Glasgow, 2021) — Ireland committed to more ambitious Nationally Determined Contributions (NDCs) under the Paris Agreement. This directly informed the <b>Climate Action Plan 2023</b>, which set a legally-binding target of 51% reduction in overall emissions by 2030 and introduced sector-specific carbon budgets for the first time.</p> <p><b>Example 2:</b> COP21 / Paris Agreement (2015) — Ireland agreed to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C. This led to Ireland's <b>Climate Action and Low Carbon Development (Amendment) Act 2021</b>, which enshrined a legally binding net-zero greenhouse gas emissions target by 2050 and an interim target of 51% reduction by 2030 into Irish law.</p>	8

(d)(i) Name and describe one Irish environmental policy and its impact. (4 marks: 2 + 2)

(d)(ii) Has this policy been successfully implemented? (4 marks)

(d)(i): 2 marks for naming a valid policy + 2 marks for describing its environmental impact. (d)(ii): 4 marks — award for a balanced, evidence-based assessment of implementation success. Accept either success or partial success if reasoning is sound.

Part	Acceptable Answer(s)	Marks
(d)(i) 4 marks	<p>Valid Irish policies (accept any relevant policy):</p> <ul style="list-style-type: none"> <li>• <b>Plastic bag levy (2002)</b> — reduced plastic bag use by over 90%, significantly reducing litter in hedgerows and waterways.</li> <li>• <b>Deposit Return Scheme (2024)</b> — incentivises return of plastic bottles and cans, reducing packaging litter and increasing recycling rates.</li> <li>• <b>Carbon tax</b> — raises cost of fossil fuels, incentivising behaviour change; revenue funds social protections and Just Transition.</li> <li>• <b>Renewable Energy Support Scheme (RESS)</b> — supports development of solar and wind energy, reducing fossil fuel dependence.</li> <li>• <b>National Biodiversity Action Plan</b> — sets targets to halt biodiversity loss, protect habitats and species.</li> <li>• <b>ACRES agri-environment scheme</b> — pays farmers to adopt environmentally beneficial practices.</li> <li>• <b>Climate Action Plan 2023</b> — sets out sectoral targets and actions across all areas of the economy.</li> </ul>	2 + 2

Part	Acceptable Answer(s)	Marks
<p><b>(d)(ii)</b> <b>4 marks</b></p>	<p>Award marks for quality of reasoning and use of evidence. Candidates may argue:</p> <p><b>Success:</b> e.g. Plastic bag levy widely regarded as one of Europe's most successful environmental policies — rapid and dramatic behaviour change achieved; deposit return scheme showing high return rates in early operation.</p> <p><b>Partial success / challenges:</b> e.g. Carbon tax revenue not always fully ring-fenced for climate action; Ireland's overall emissions have been slow to fall in transport and agriculture sectors; planning delays for renewable energy projects; biodiversity targets consistently missed.</p>	<p><b>4</b></p>

## Question 6 — Climate Loss and Damage, Mitigation and Decarbonisation (40 marks)

(a) Explain the term “climate loss and damage”. (6 marks)

Part	Acceptable Answer(s)	Marks
6 marks	<p>The negative impacts of climate change — both economic and non-economic — that cannot be avoided through adaptation or reduced through mitigation. Includes:</p> <ul style="list-style-type: none"> <li>• Permanent loss of land and territory (especially for small island developing states);</li> <li>• Loss of cultural heritage, indigenous practices, and identity tied to place;</li> <li>• Destruction of ecosystems;</li> <li>• Damage from extreme weather events;</li> <li>• Involuntary displacement of communities.</li> </ul> <p><b>Key context (for development marks):</b> The Loss and Damage Fund was agreed at COP27 (Sharm el-Sheikh, Egypt, 2022) and operationalised at COP28 (Dubai, 2023). It represents a formal recognition by wealthy, high-emitting nations of their responsibility to support the most climate-vulnerable countries that have contributed least to the crisis.</p>	6

(b) One climate mitigation strategy — location, description, and how it addresses a cause of climate change. (10 marks)

*2 marks for stating the location + 4 marks for describing the strategy + 4 marks for explaining how it addresses a cause of climate change. Location must be specifically named.*

Part	Acceptable Answer(s)	Marks
10 marks	<p>Accept any coherent mitigation strategy with a named location. Award: 2 marks (location) + 4 marks (description) + 4 marks (cause addressed).</p> <p><b>Denmark — offshore wind:</b> Major investment in offshore wind (Horns Rev etc.); wind provides &gt;50% of electricity; displaces fossil fuel combustion; directly reduces CO<sub>2</sub> from electricity sector.</p> <p><b>Costa Rica — renewable electricity:</b> Near-100% renewable electricity (hydro, geothermal, wind, solar); eliminates fossil fuel power generation; CO<sub>2</sub> from electricity sector near zero.</p> <p><b>Ireland — RESS:</b> Government auction scheme for wind/solar; displaces natural gas and coal; reduces GHG emissions from electricity.</p> <p><b>Norway — EV incentives:</b> Tax exemptions/subsidies since 1990s; EVs now majority of new sales; reduces transport CO<sub>2</sub> using renewable-generated electricity.</p>	2 + 4 + 4

(c) How climate justice can be promoted through a mitigation strategy. (12 marks)

4 marks for defining climate justice in context + 4 marks for examining how the strategy promotes justice + 4 marks for named examples or evidence.

Part	Acceptable Answer(s)	Marks
12 marks	<p><b>Climate justice defined:</b> Climate justice is the recognition that climate change is not ethically neutral — those least responsible for historical greenhouse gas emissions (Global South nations, indigenous peoples, low-income communities, future generations) bear the greatest burden of climate impacts. Just climate action must include fair burden-sharing, protection of the most vulnerable, and meaningful participation of frontline communities in decision-making.</p> <p><b>How mitigation strategies can promote justice:</b></p> <ul style="list-style-type: none"><li>• Ensuring the costs of transition do not fall disproportionately on low-income households (e.g. carbon tax revenue funding social protections and energy poverty supports).</li><li>• Including community benefit funds in renewable energy projects — e.g. Irish RESS requires developers to contribute to local community funds.</li><li>• Just Transition programmes for workers in fossil-fuel-dependent industries — e.g. Ireland's Just Transition Commissioner for the Midlands peatland region; retraining and new employment opportunities for former Bord na Móna workers.</li><li>• Technology transfer and financing for developing countries to access clean energy, so they do not have to choose between development and decarbonisation.</li></ul>	4 + 4 + 4

**(d) Nature-based approach to decarbonisation. (12 marks: 2 + 10)**

<b>Part</b>	<b>Acceptable Answer(s)</b>	<b>Marks</b>
<b>(d)(i)</b> <b>2 marks</b>	Any ONE valid nature-based approach, e.g.: <ul style="list-style-type: none"><li>• Afforestation / Reforestation</li><li>• Peatland / bog restoration</li><li>• Seagrass restoration</li><li>• Kelp forest restoration</li><li>• Soil carbon sequestration</li><li>• Agroforestry</li><li>• Mangrove restoration</li><li>• Blue carbon ecosystems</li></ul>	<b>2</b>
<b>(d)(ii)</b> <b>10 marks</b> <b>(5 description</b> <b>+ 5 explanation)</b>	<p><b>Example — Peatland / Bog Restoration:</b></p> <p><b>Description (5 marks):</b> Peatland restoration involves rewetting previously drained bog by blocking or removing drainage channels (drains/grips), allowing the water table to rise back to the surface. This enables sphagnum mosses and other bog-forming plants to re-establish. In Ireland, this is being done at scale on former industrial peatlands by organisations including the National Parks and Wildlife Service and Bord na Móna.</p> <p><b>Explanation of decarbonisation (5 marks):</b> Healthy, waterlogged peatlands act as carbon sinks — plants absorb CO<sub>2</sub> through photosynthesis and, because decomposition is very slow in anaerobic (oxygen-free) waterlogged conditions, organic matter accumulates as peat over millennia, locking carbon away. When peatlands are drained (for agriculture or peat extraction), aerobic conditions allow decomposition, releasing stored CO<sub>2</sub> and CH<sub>4</sub>. Rewetting reverses this: it halts emissions and, over time, restarts carbon sequestration. Irish peatlands, if fully restored, could sequester an estimated 100,000 tonnes of CO<sub>2</sub> per year.</p>	<b>10</b>

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**Section C****80 marks**

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Answer **one** question in this section. Each question carries 80 marks.

**Section C Assessment Criteria**

<b>Criterion</b>	<b>Descriptor</b>	<b>Max</b>	<b>Band Marks</b>
<b>Knowledge &amp; Understanding</b>	Accurate, relevant factual content; understanding of key CASD concepts (sustainability, justice, systems thinking, climate science); appropriate use of subject terminology.	<b>32</b>	H: 28–32 M: 18–27 L: 0–17
<b>Analysis &amp; Evaluation</b>	Critical thinking; ability to discuss multiple perspectives including justice frameworks and real-world application; quality of argument; use of evidence to support claims; engagement with root causes and systemic issues.	<b>28</b>	H: 24–28 M: 15–23 L: 0–14
<b>Use of Examples</b>	Named, specific, relevant examples used to support arguments; both local (Irish) and global examples expected at higher bands; case studies from the CASD course are particularly valued.	<b>12</b>	H: 10–12 M: 6–9 L: 0–5
<b>Communication</b>	Clarity of expression; logical structure and flow; appropriate academic register; coherent essay format.	<b>8</b>	H: 7–8 M: 4–6 L: 0–3

## Question 7 — Just Transition for Transport in Ireland (80 marks)

The essay must address all three bullet points for highest marks. Examiners should assess the essay holistically using the four criteria above.

Required Element	Expected Content — High-Band Response
<p><b>Meaning of a just transition</b></p>	<p>A just transition is a framework for shifting to a low-carbon economy in a way that is fair, equitable, and inclusive — ensuring no worker, community, or region is left behind as the economy decarbonises.</p> <p><b>Key features:</b></p> <ul style="list-style-type: none"> <li>• Social dialogue between government, industry, trade unions, and communities.</li> <li>• Workers in fossil-fuel-dependent sectors (e.g. peat extraction workers in the Irish Midlands, those in automotive manufacturing) receive retraining, social protection, income support, and new employment opportunities.</li> <li>• Community reinvestment — public investment in affected areas to create new economic activity.</li> <li>• The concept emerged from the trade union movement and is now embedded in international climate agreements, including COP26 commitments and the EU Green Deal's Just Transition Mechanism.</li> </ul> <p><b>Key terms:</b> social dialogue, worker rights, equitable distribution of costs and benefits, retraining/reskilling, community investment, intergenerational equity.</p>
<p><b>Why transport needs to change</b></p>	<p>Transport is one of Ireland's highest-emitting sectors, accounting for approximately 20% of total greenhouse gas emissions. Ireland has a high level of car dependency, particularly in rural areas, due to historically poor investment in public transport infrastructure.</p> <p><b>Key points:</b></p> <ul style="list-style-type: none"> <li>• Petrol and diesel vehicles emit CO<sub>2</sub>, nitrogen oxides (NO<sub>x</sub>), and particulates, contributing to both climate change and air-quality problems.</li> <li>• Ireland's Climate Action Plan 2023 sets binding targets: 50% of private cars to be electric vehicles (EVs) by 2030; 500,000 EVs on Irish roads by 2030; a 10-minute city concept for urban areas.</li> <li>• Investment committed in BusConnects (Dublin, Cork, Galway) and DART+ rail expansion.</li> <li>• Ireland's transport emissions have not fallen at the pace required to meet the legally-binding 51% reduction target by 2030 — urgent structural change is needed.</li> <li>• Climate targets under the Paris Agreement and EU law (Fit for 55 package) require Ireland to decarbonise transport substantially.</li> </ul>

Required Element	Expected Content — High-Band Response
<p><b>Making the transition just</b></p>	<p><b>Affordability:</b> EVs remain significantly more expensive than petrol/diesel equivalents. To make the transition just, subsidies and grants must be targeted at lower-income households (e.g. SEAI EV grants, zero-emission vehicle tax incentives). Carbon tax increases must be offset by social protections (e.g. the fuel allowance, warmer homes scheme) to avoid disproportionate burden on those least able to pay.</p> <p><b>Rural and public transport:</b> In rural Ireland, where car dependency is structurally unavoidable, investment in public transport is essential to ensure rural communities are not left behind. The Connecting Ireland Rural Mobility Plan and Rural Transport Programme are relevant here.</p> <p><b>Worker justice:</b> Workers in the fossil fuel supply chain and automotive/transport sectors need transition support — retraining schemes (e.g. Bord na Móna retraining in the Midlands), new green economy jobs, and community reinvestment funds.</p> <p><b>Inclusive planning:</b> Transport planning must actively include marginalised communities — people with disabilities, elderly people, Travellers, low-income communities — whose needs are often overlooked in infrastructure planning. Active travel infrastructure (cycling lanes, footpaths) promotes sustainable transport while improving public health.</p> <p><b>Named examples:</b> BusConnects · DART+ expansion · EV charging infrastructure rollout · Greenways · Rural Transport Programme · Connecting Ireland plan · Midlands Just Transition Fund.</p>

## Question 8 — Climate Action, Climate Justice for Humanity and Nature (80 marks)

The essay must address all three bullet points for highest marks. Examiners should assess the essay holistically using the four criteria above.

Required Element	Expected Content — High-Band Response
<b>Understanding of climate justice</b>	<p>Climate justice recognises that climate change is not merely an environmental or technical challenge but a profound moral and political one. The burden of climate impacts falls most heavily on those who have contributed least to greenhouse gas emissions.</p> <p><b>Key dimensions of climate justice:</b></p> <ul style="list-style-type: none"><li>• <b>Recognition:</b> Acknowledging the historical emissions responsibility of wealthy industrialised nations (responsible for the majority of cumulative atmospheric CO<sub>2</sub>).</li><li>• <b>Distribution:</b> Equitable sharing of both the burdens (costs of action) and benefits (clean energy access, economic opportunities) of climate action.</li><li>• <b>Participation:</b> Meaningful inclusion of frontline communities — Global South nations, indigenous peoples, future generations, low-income communities — in decision-making.</li><li>• <b>Remedy:</b> Recognition that those harmed by climate change are owed support, including through the Loss and Damage Fund.</li></ul> <p><b>Key references:</b> Mary Robinson Foundation for Climate Justice; Fridays for Future; UNFCCC principle of <i>common but differentiated responsibilities and respective capabilities</i>; Loss and Damage Fund (COP27/28).</p>

Required Element	Expected Content — High-Band Response
<p><b>Healthy ecosystems and human rights interdependence</b></p>	<p>Human rights — including the rights to food, clean water, health, shelter, and life itself — cannot be fully realised without healthy, functioning ecosystems. The UN formally recognised the right to a clean, healthy and sustainable environment in a landmark resolution in 2022.</p> <p><b>Examples of interdependence:</b></p> <ul style="list-style-type: none"> <li>• Deforestation in the Amazon destroys biodiversity AND displaces indigenous communities, directly threatening their right to life, culture, and self-determination.</li> <li>• Coral reef collapse removes fish stocks that provide the primary source of animal protein for approximately 1 billion people globally, threatening their right to food.</li> <li>• Wetland destruction removes natural flood buffers, increasing the risk of flooding that threatens communities' rights to security, shelter, and safe living conditions.</li> </ul> <p><b>Healthy ecosystems provide:</b> clean water filtration; air purification; climate regulation; pollination of food crops; raw materials for medicines; cultural and spiritual values.</p> <p>Loss of ecosystems therefore equals loss of the conditions for the realisation of human rights, especially for the most marginalised.</p> <p><b>SDG links:</b> SDG 15 (Life on Land), SDG 14 (Life Below Water), SDG 3 (Good Health and Wellbeing), SDG 6 (Clean Water).</p>

Required Element	Expected Content — High-Band Response
<p><b>Actions addressing root causes of climate injustice</b></p>	<p><b>Root causes include:</b> fossil fuel dependency and the political power of fossil fuel corporations; colonial and neo-colonial global economic inequality; lack of political representation for vulnerable communities; short-term profit motive dominating decision-making; environmental racism in the siting of polluting industries.</p> <p><b>Actions (candidates should discuss at least 2–3 with development):</b></p> <p><b>1. Fossil fuel divestment and taxation</b> — targeting the source of emissions; holding corporations accountable for concealing climate science (e.g. Exxon litigation); carbon pricing creating incentives to shift investment.</p> <p><b>2. Loss and Damage Fund</b> — agreed at COP27 (2022); represents reparative justice, acknowledging that wealthy nations owe support to those suffering climate impacts they did not cause.</p> <p><b>3. Rights of Nature legislation</b> — e.g. Ecuador's Pachamama rights (2008 constitution); New Zealand's Whanganui River personhood (2017) — giving legal standing to ecosystems protects them from exploitation.</p> <p><b>4. Indigenous land rights recognition</b> — indigenous and community-managed territories cover approximately 80% of the world's remaining biodiversity; legal recognition of land rights protects both people and ecosystems.</p> <p><b>5. Just transition programmes</b> — ensuring low-income workers and communities benefit from the green economy rather than bearing its costs (e.g. Midlands Just Transition in Ireland).</p> <p><b>6. Climate litigation</b> — legal cases holding governments to their commitments, e.g. <i>Urgenda Foundation v. Netherlands</i> (2019) — Dutch courts ordered the government to cut emissions by 25% by 2020.</p> <p>High-scoring responses will demonstrate nuanced understanding that achieving climate justice requires both rapid emissions reductions <b>AND</b> structural changes to economic power, political representation, and global inequality systems.</p>

*This marking scheme is indicative. Examiners should use professional judgement when awarding marks and credit all reasonable responses not listed here. Prepared by SimpleStudy for study purposes; not an official State Examinations Commission document.*