



Qualification Specification

ProQual Level 7 Diploma in Environment Management

ProQual Level 7 Diploma in Environmental Management



This qualification is part of ProQual's broad offer of qualifications in the Sustainability Sector.

To find out more about other qualifications in this, or any other sector, or for our latest fees; check our Fees Schedule via the QR code below:



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Introduction

The ProQual Level 7 Diploma Environmental Management provides a nationally recognised qualification for individuals responsible for developing, implementing, and maintaining environmental management systems within an organisation. This qualification is ideal for managers seeking to enhance their expertise in environmental sustainability, compliance, and best practices.

The aims of this qualification are:

- To allow candidates to develop knowledge of environmental and sustainability management procedures.
- To provide candidates with opportunities to apply their knowledge of environmental and sustainability management in their organisation.
- To facilitate career development for those interested in environmental and sustainability management.

The awarding body for this qualification is ProQual AB. This qualification has been approved for delivery in England, and to overseas candidates through approved satellite centres. The regulatory body for this qualification is Ofqual, and this qualification has been accredited onto the Regulated Qualification Framework (RQF), and has been published in Ofqual's Register of Qualifications.

Qualification Profile

Qualification Title:	ProQual Level 7 Diploma in Environmental Management
Qualification Number:	610/5231/0
Level:	7
Total Qualification Time (TQT):	1200 Hours 120 Credits
Guided Learning Hours (GLH):	600 Hours
Assessment:	Pass / Fail
	Internally assessed and verified by centre staff
	Externally verified by ProQual Verifiers
Qualification Start Date:	01/02/2025
Qualification Review Date:	01/02/2028

Learner Profile

There are no formal academic entry requirements for this qualification. Centres should carry out an initial assessment of candidate skills and knowledge to identify and gaps and inform the assessment plan.

Candidates must be aged 19 years or older on the day they are registered for this qualification. Centres are reminded that no assessment should take place before candidates are registered.

Candidates who complete this qualification may progress onto a MSc Environmental Management or similar qualification.

Qualification Structure

This qualification consists of **ten** mandatory units. Candidates must complete all mandatory units to complete this qualification.

Unit Number	Unit Title	Level	TQT	GLH
Mandatory Units – Candidates must complete all units in this group.				
J/651/4483	Environmental Policy and Governance	7	120	60
K/651/4484	Environmental Impact Assessment	7	120	60
L/651/4485	Sustainable Development	7	120	60
M/651/4486	Environmental Risk Management	7	120	60
R/651/4487	Climate Change and Energy Management	7	120	60
T/651/4488	Environmental Management Systems	7	120	60
Y/651/4489	Sustainable Resource and Waste Management	7	120	60
F/651/4490	Environmental Economics	7	120	60
H/651/4491	Environmental Auditing and Reporting	7	120	60
J/651/4492	Research Methods in Environmental Management	7	120	60

Centre Requirements

Centres must be approved to deliver this qualification. If your centre is not approved to deliver this qualification, please complete and submit the **ProQual Additional Qualification Approval Form**.

Materials produced by centres to support candidates should:

- Enable them to track their achievements as they progress through the learning outcomes and assessment criteria.
- Provide information on where ProQual's policies and procedures can be viewed.
- Provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence.

Centres must have the appropriate equipment to enable candidates to carry out the practical requirements of this qualification.

Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title:

ProQual Level 7 Diploma in Environmental Management

Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement.

Assessment Requirements

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

Evidence can include:

- Observation report by assessor
- Assignments/projects/reports
- Professional discussion
- Witness testimony
- Candidate product
- Worksheets
- Record of oral and written questioning
- Recognition of Prior Learning

Candidates must demonstrate the level of competence described in the units. Assessment is the process of measuring a candidate's skill, knowledge and understanding against the standards set in the qualification.

Centre staff assessing this qualification must be **occupationally competent** and qualified to make assessment decisions. Assessors who are suitably qualified may hold a qualification such as, but not limited to:

- ProQual Level 3 Certificate in Teaching, Training and Assessment.
- ProQual Level 3 Award in Education and Training.
- ProQual Level 3 Award in Assessing Competence in the Work Environment.
(Suitable for assessment taking place in a working salon only.)
- ProQual Level 3 Award in Assessing Vocational Achievement.
(Suitable for assessment taking place in a simulated training environment only.)

Candidate portfolios must be internally verified by centre staff who are **occupationally knowledgeable** and qualified to make quality assurance decisions. Internal verifiers who are suitably qualified may hold a qualification such as:

- ProQual Level 4 Award in the Internal QA of Assessment Processes and Practice.
- ProQual Level 4 Certificate in Leading the Internal QA of Assessment Processes and Practice.

Occupationally competent means capable of carrying out the full requirements contained within a unit. **Occupationally knowledgeable** means possessing relevant knowledge and understanding.

Enquiries, Appeals and Adjustments

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Units – Learning Outcomes and Assessment Criteria

Title:		Environmental Policy and Governance		Level:	7
Unit Number:		J/651/4483	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Critically analyse the role of environmental policies and governance frameworks in addressing global environmental challenges.	1.1	Explain the significance of environmental policies in managing global environmental issues.		
		1.2	Identify key international governance frameworks and their impact on environmental policy.		
		1.3	Analyse the effectiveness of national and regional policies in responding to environmental challenges.		
		1.4	Discuss the relationship between policy frameworks and environmental outcomes.		
		1.5	Discuss the role of international organizations, governments, and NGOs in shaping environmental governance.		
		1.6	Analyse case studies where governance frameworks have contributed to or hindered sustainable development.		
2	Evaluate the roles of various stakeholders in the development and implementation of environmental policies.	2.1	Identify key stakeholders in environmental policy.		
		2.2	Discuss the influence of stakeholders on the policymaking process.		
		2.3	Evaluate the importance of public participation in policy development and decision-making.		
		2.4	Analyse the challenges stakeholders face when implementing environmental policies.		

2	<i>Continued</i>	2.5	Analyse the role of lobbying and advocacy in shaping environmental policies.
		2.6	Analyse how the interests of different stakeholders align or conflict in the policy development process.
		2.7	Identify examples of stakeholder collaboration or conflict in real-world environmental policy cases.
3	Critically assess the integration of environmental policy within broader governance structures and sustainable development goals (SDGs).	3.1	Analyse how environmental policies align with broader governance frameworks, such as sustainable development goals (SDGs).
		3.2	Analyse the role of environmental policy in promoting social, economic, and environmental sustainability.
		3.3	Discuss the challenges in integrating environmental policies with other sectors (e.g., economic development, poverty reduction).
		3.4	Evaluate the coherence and synergy between environmental governance structures and international development frameworks.
		3.5	Discuss the effectiveness of policy integration for achieving long-term sustainable development.
		3.6	Identify case studies demonstrating successful integration of environmental and governance frameworks.
4	Assess the legal and regulatory mechanisms used in environmental governance and their effectiveness.	4.1	Identify key legal and regulatory mechanisms in environmental governance at the international, national, and local levels.
		4.2	Analyse the effectiveness of environmental laws in reducing pollution, protecting biodiversity, and promoting sustainability.
		4.3	Discuss the challenges in enforcing environmental laws and regulations.
		4.4	Evaluate the role of environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) in governance.
		4.5	Analyse the role of judicial and legislative bodies in shaping environmental law.
		4.6	Discuss regulatory mechanisms across different regions or countries.

5	Develop a framework for the policy formulation process in the context of environmental management.	5.1	Describe the key steps involved in the policy formulation process, from problem identification to policy implementation.
		5.2	Evaluate the tools and methods used for environmental policy analysis.
		5.3	Analyse the role of evidence-based research in the policy formulation process.
		5.4	Discuss the role of public consultation and stakeholder engagement in policy design.
		5.5	Propose strategies to overcome barriers to effective policy formulation in environmental management.
		5.6	Produce a conceptual framework for developing an environmental policy on a specific issue, such as climate change or waste management.
6	Critically examine the role of international environmental agreements and conventions in shaping global environmental policy.	6.1	Identify key international environmental agreements and conventions (e.g., Paris Agreement, Convention on Biological Diversity).
		6.2	Discuss the mechanisms by which international agreements influence national policies.
		6.3	Evaluate the success and limitations of international environmental agreements in achieving global environmental goals.
		6.4	Analyse the role of compliance and monitoring systems in international environmental agreements.
		6.5	Discuss the challenges and opportunities of international cooperation in addressing transboundary environmental issues.
		6.6	Analyse the role of global environmental governance institutions in promoting international cooperation.

7	Evaluate the influence of economic instruments and market-based approaches on environmental governance.	7.1	Discuss the role of economic instruments, such as carbon taxes, subsidies, and cap-and-trade systems, in environmental governance.
		7.2	Analyse the effectiveness of market-based approaches in achieving environmental sustainability.
		7.3	Discuss the advantages and disadvantages of using economic incentives to drive environmental change.
		7.4	Discuss how economic instruments can be integrated into existing environmental policies and governance frameworks.
		7.5	Evaluate the role of private sector involvement in the use of economic instruments for environmental governance.
		7.6	Discuss the ethical considerations and potential inequities in the application of market-based approaches to environmental governance.
8	Critically examine the challenges of implementing environmental policies at local, national, and international levels.	8.1	Identify common barriers to the implementation of environmental policies at different levels (local, national, international).
		8.2	Discuss the role of political, economic, and social factors in hindering policy implementation.
		8.3	Evaluate the impact of institutional capacity and governance structures on policy effectiveness.
		8.4	Discuss the role of corruption, power dynamics, and vested interests in policy implementation challenges.
		8.5	Explain the importance of monitoring, evaluation, and accountability mechanisms in policy enforcement.
		8.6	Suggest solutions to address the challenges of policy implementation in environmental management.

Additional Assessment Information

Learning outcomes 1, 2, 3, 4, 6, 7, and 8 are **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Learning Outcome 5 is **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
- Production of organisational documents.

An observation report and witness testimony are differentiated as follows:

- An **assessor's report** is completed by a qualified assessor who observes the candidate carrying out practical work. The assessor will make assessment decisions as they observe and record these in the report, alongside a commentary of what they observe.
- A **witness statement** is completed by a suitably qualified or experienced expert who observes the candidate carrying out practical work. The witness statement will contain **only** a commentary of what has been observed. An assessor must then use the witness statement, alongside any additional evidence to make assessment decisions.
- In all cases, an assessor's report is preferred as evidence over a witness statement; as it is always better for an assessor to observe a candidate live.

Assessors may wish use to use a checklist or evidence matrix to organise and track the assessment outcomes that have been achieved, but these **do not**, in themselves, constitute evidence of achievement.

An assessor's report or witness statement alone is unlikely to be sufficient evidence of achievement. Reports and statements should always be accompanied by photographic and/or video evidence or sit alongside real workplace documents produced by the candidate.

The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Title:		Environmental Impact Assessment		Level:	7
Unit Number:	K/651/4484	TQT:	120	GLH:	60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the principles and framework of Environmental Impact Assessment (EIA).	1.1	Explain the purpose and objectives of Environmental Impact Assessment (EIA).		
		1.2	Identify the key stages in the EIA process.		
		1.3	Evaluate the legal and regulatory frameworks governing EIA in various jurisdictions.		
		1.4	Discuss the importance of stakeholder involvement in the EIA process.		
		1.5	Discuss the ethical considerations in conducting EIA.		
		1.6	Analyse the challenges in implementing EIA within different sectors.		
2	Analyse the environmental factors to be considered during the EIA process.	2.1	Identify the key environmental components to be assessed in an EIA.		
		2.2	Describe the methodologies used to assess the impacts on biodiversity, water, air, and soil.		
		2.3	Evaluate the significance of cumulative and long-term environmental impacts.		
		2.4	Discuss the impact of climate change on environmental assessments.		
		2.5	Analyse the interrelationships between various environmental factors.		
		2.6	Analyse how socio-economic factors interact with environmental impacts in an EIA.		

3	Evaluate the methods used to predict and assess environmental impacts.	3.1	Discuss different qualitative and quantitative methods for impact prediction.
		3.2	Evaluate the effectiveness of modelling techniques in impact prediction.
		3.3	Analyse the limitations and uncertainties in environmental impact predictions.
		3.4	Analyse the role of Geographic Information Systems (GIS) in impact assessments.
		3.5	Discuss the role of expert judgment in predicting environmental outcomes.
		3.6	Discuss the reliability of data sources used in impact assessment processes.
4	Develop mitigation strategies for identified environmental impacts.	4.1	Identify the key principles in designing mitigation strategies.
		4.2	Evaluate different mitigation techniques for air, water, and soil impacts.
		4.3	Produce a comprehensive mitigation plan addressing identified environmental impacts.
		4.4	Discuss the role of alternative development options in mitigating environmental impacts.
		4.5	Analyse the effectiveness of compensatory measures in mitigation plans.
		4.6	Discuss the role of adaptive management in long-term mitigation strategies.
5	Understand the process of preparing and reviewing an EIA report.	5.1	Explain the structure and contents of an EIA report.
		5.2	Evaluate the process of data collection and analysis in EIA reports.
		5.3	Discuss the role of public consultations and stakeholder feedback in the EIA report preparation.
		5.4	Analyse the integration of environmental, social, and economic factors in EIA reports.
		5.5	Analyse case studies to identify common strengths and weaknesses in EIA reports.
		5.6	Evaluate the quality and clarity of an EIA report in terms of transparency and accessibility.

6	Assess the effectiveness of the EIA process in decision-making.	6.1	Discuss how EIA influences policy, planning, and development decisions.
		6.2	Evaluate the decision-making process based on EIA findings.
		6.3	Analyse the effectiveness of EIA in preventing or minimizing negative environmental impacts.
		6.4	Analyse the role of EIA in enhancing sustainable development practices.
		6.5	Discuss the strengths and limitations of the EIA process in real-world decision-making.
		6.6	Discuss the monitoring and post-implementation stages of the EIA process.
7	Understand the roles and responsibilities of different stakeholders in EIA.	7.1	Identify the key stakeholders involved in the EIA process.
		7.2	Discuss the responsibilities of government agencies, project developers, and NGOs in the EIA process.
		7.3	Analyse the role of the public and local communities in the EIA process.
		7.4	Evaluate the ethical responsibilities of EIA professionals and consultants.
		7.5	Discuss the conflicts of interest that may arise between stakeholders in EIA processes.
		7.6	Discuss strategies for effective communication and engagement with stakeholders during the EIA process.
8	Analyse case studies of environmental impact assessments.		Discuss various case studies to identify key lessons learned from EIA processes.
			Analyse the effectiveness of EIA in addressing the environmental impacts in the case studies.
			Discuss the role of public participation in the success or failure of case study EIAs.
			Analyse the scope and limitations of EIA in the case studies.
			Identify best practices from case studies for the management of environmental impacts.
			Discuss how case studies can be used to improve future EIA practices and decision-making.

Additional Assessment Information

This unit is **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Title:		Sustainable Development		Level:	7
Unit Number:		L/651/4485	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the principles of sustainable development and its importance in environmental management.	1.1	Explain the key concepts and definitions of sustainable development.		
		1.2	Discuss the historical evolution of sustainable development and its global impact.		
		1.3	Identify the main pillars of sustainable development (economic, environmental, and social).		
		1.4	Discuss the significance of sustainable development in the context of climate change and resource management.		
		1.5	Evaluate the role of international organizations and agreements (e.g., the UN SDGs) in promoting sustainable development.		
2	Analyse the environmental, economic, and social dimensions of sustainable development.	2.1	Compare the environmental, economic, and social dimensions of sustainable development.		
		2.2	Identify examples of sustainable practices in each dimension.		
		2.3	Analyse the interdependence between environmental protection, economic growth, and social inclusion.		
		2.4	Evaluate challenges and opportunities in balancing the three dimensions of sustainability.		
		2.5	Apply frameworks like the Triple Bottom Line (TBL) to assess sustainability in real-world scenarios.		

3	Critically assess the role of policy, regulations, and governance in achieving sustainable development.	3.1	Identify key national and international policies and regulations that promote sustainable development.
		3.2	Evaluate the effectiveness of current environmental policies in addressing sustainable development goals.
		3.3	Analyse the role of governmental and non-governmental organizations in influencing policy decisions.
		3.4	Identify key national and international policies and regulations that promote sustainable development.
		3.5	Analyse the impact of corporate governance and accountability on sustainable practices.
		3.6	Discuss the barriers to effective policy implementation in achieving sustainability.
4	Evaluate the role of technology and innovation in promoting sustainable development.	4.1	Discuss how technological innovations contribute to sustainability across various sectors.
		4.2	Evaluate the environmental and social impacts of emerging technologies, including renewable energy and green technologies.
		4.3	Discuss the role of innovation in enhancing resource efficiency and reducing waste.
		4.4	Discuss the challenges and opportunities of adopting sustainable technologies in developing countries.
		4.5	Analyse case studies of successful technological solutions that promote sustainable development.

5	Assess the impact of corporate social responsibility (CSR) on sustainable development.	5.1	Define Corporate Social Responsibility (CSR) and explain its significance in sustainable development.
		5.2	Analyse the role of CSR in driving environmental and social change.
		5.3	Evaluate the effectiveness of CSR programs in improving environmental and social outcomes.
		5.4	Analyse how businesses balance economic success with their sustainability commitments.
		5.5	Identify examples of organisations that have successfully integrated CSR into their business strategies.
6	Explore sustainable development challenges in different sectors.	6.1	Identify sustainability challenges in key sectors such as agriculture, energy, industry, and transport.
		6.2	Evaluate the environmental, economic, and social implications of unsustainable practices in each sector.
		6.3	Suggest solutions or strategies to promote sustainable practices within these sectors.
		6.4	Analyse the role of government regulations and market forces in driving sustainability in various industries.
		6.5	Discuss the role of consumer behaviour in influencing sector-specific sustainability efforts.
7	Develop strategies for integrating sustainable development practices into organizational and community planning.	7.1	Explain the process of integrating sustainability into organizational or community planning.
		7.2	Evaluate the role of stakeholders in the planning process for sustainable development.
		7.3	Identify tools and frameworks for integrating sustainability.
		7.4	Suggest strategies for promoting sustainability in organizational decision-making processes.
		7.5	Analyse case studies where sustainable practices have been successfully incorporated into community or organizational plans.

8	Critically evaluate the challenges of measuring and monitoring sustainability in real-world contexts.	8.1	Identify key indicators used to measure sustainability in environmental, economic, and social contexts.
		8.2	Discuss the challenges in defining and measuring sustainability.
		8.3	Analyse the limitations and advantages of different sustainability metrics and measurement tools.
		8.4	Analyse how data is used to monitor sustainability progress and inform decision-making.
		8.5	Produce recommendations on improving the effectiveness of sustainability monitoring in various industries and sectors.
		8.6	Identify key indicators used to measure sustainability in environmental, economic, and social contexts.

Additional Assessment Information

This unit is **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Title:		Environmental Risk Management		Level:	7
Unit Number:		M/651/4486	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the principles and concepts of environmental risk management.	1.1	Define environmental risk management and explain its key principles.		
		1.2	Explain the relationship between risk, hazard, and vulnerability in the context of environmental management.		
		1.3	Discuss different risk management strategies, including preventive, corrective, and adaptive approaches.		
		1.4	Evaluate the importance of risk management in achieving sustainable environmental goals.		
		1.5	Discuss how environmental risk management contributes to corporate social responsibility (CSR).		
		1.6	Identify various types of environmental risks, such as natural, technological, and socio-political risks.		
2	Evaluate environmental risk assessment techniques and methodologies.	2.1	Analyse different environmental risk assessment techniques, including: - Qualitative. - Quantitative. - Semi-quantitative.		
		2.2	Discuss the role of risk assessment frameworks, such as ISO 14001, in environmental management.		
		2.3	Apply the steps of a risk assessment process to a case study, including hazard identification, risk analysis, risk evaluation, and mitigation measures.		
		2.4	Discuss the limitations and strengths of various risk assessment methods.		

2	<i>Continued</i>	2.5	Discuss how environmental risk assessments help in decision-making processes for sustainable management practices.
		2.6	Evaluate the importance of stakeholder engagement in the risk assessment process.
3	Apply environmental risk management tools to real-world scenarios.	3.1	Demonstrate the use of environmental risk management software tools for assessing and mitigating environmental risks.
		3.2	Produce a risk management plan for a specific environmental risk scenario, outlining the stages of risk identification, assessment, control, and review.
		3.3	Implement a risk management approach that incorporates monitoring and review mechanisms to ensure long-term environmental sustainability.
		3.4	Evaluate the effectiveness of risk management tools in different environmental sectors, such as waste management, water conservation, and biodiversity protection.
		3.5	Suggest alternative risk management strategies based on different environmental contexts and challenges.
		3.6	Analyse the economic, environmental, and social implications of applying risk management tools.
4	Understand the role of legislation and regulation in environmental risk management.	4.1	Describe key environmental legislation and regulations that govern environmental risk management practices.
		4.2	Evaluate the role of government policies in regulating environmental risks and promoting sustainable practices.
		4.3	Discuss the relationship between environmental risk management and international agreements such as the Paris Agreement or Agenda 2030.
		4.4	Discuss the implications of non-compliance with environmental regulations for organizations and the wider community.

4	<i>Continued</i>	4.5	Analyse how environmental regulations can shape business practices and influence corporate risk management strategies.
		4.6	Identify and explain the role of regulatory bodies and their influence on environmental risk management.
5	Identify and analyse emerging environmental risks.	5.1	Discuss current global trends and emerging environmental risks, such as climate change, pollution, and resource depletion.
		5.2	Evaluate the potential impact of new environmental risks on ecosystems, human health, and economic stability.
		5.3	Discuss the role of scientific research in identifying and understanding new environmental risks.
		5.4	Suggest methods for early identification and assessment of emerging environmental risks.
		5.5	Analyse how emerging environmental risks influence policy development and business strategies.
		5.6	Discuss the potential consequences of inaction in addressing emerging environmental risks.
6	Develop strategies for risk reduction and mitigation in environmental management.	6.1	Identify and describe risk reduction and mitigation techniques, including technological, managerial, and policy-driven strategies.
		6.2	Produce a risk mitigation strategy that incorporates both short-term and long-term goals.
		6.3	Evaluate the effectiveness of different risk mitigation strategies in reducing environmental impacts.
		6.4	Discuss the role of public awareness, education, and communication in implementing risk reduction strategies.
		6.5	Analyse the feasibility of applying risk mitigation strategies in various industries such as agriculture, energy, and manufacturing.
		6.6	Discuss the integration of sustainable practices with environmental risk reduction efforts.

7	Analyse the role of environmental monitoring and auditing in risk management.	7.1	Explain the importance of environmental monitoring and auditing in the context of risk management.
		7.2	Describe various environmental monitoring techniques, such as air, water, and soil quality assessments.
		7.3	Produce a monitoring plan for tracking environmental risks in an organization or specific area.
		7.4	Analyse the role of environmental audits in assessing the compliance and effectiveness of environmental risk management systems.
		7.5	Discuss the challenges of monitoring environmental risks in different sectors and regions.
		7.6	Suggest strategies for improving environmental monitoring and auditing practices for better risk management.
8	Communicate environmental risk management strategies to stakeholders.	8.1	Produce a communication strategy for conveying environmental risk management plans to various stakeholders (e.g., government, community, businesses).
		8.2	Explain the role of transparency and accountability in building trust with stakeholders in the risk management process.
		8.3	Produce a report or presentation that communicates risk management strategies and mitigation plans to decision-makers.
		8.4	Evaluate the effectiveness of stakeholder engagement in the development and implementation of risk management strategies.
		8.5	Discuss the role of social media and digital tools in communicating environmental risks to the public.
		8.6	Discuss the ethical considerations involved in communicating environmental risks and management practices.

Additional Assessment Information

Learning outcomes 1, 2, 4, 5, 6 and 7 are **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Learning Outcome 3 and 8 are **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
- Production of organisational documents.

An observation report and witness testimony are differentiated as follows:

- An **assessor's report** is completed by a qualified assessor who observes the candidate carrying out practical work. The assessor will make assessment decisions as they observe and record these in the report, alongside a commentary of what they observe.
- A **witness statement** is completed by a suitably qualified or experienced expert who observes the candidate carrying out practical work. The witness statement will contain **only** a commentary of what has been observed. An assessor must then use the witness statement, alongside any additional evidence to make assessment decisions.
- In all cases, an assessor's report is preferred as evidence over a witness statement; as it is always better for an assessor to observe a candidate live.

Assessors may wish to use a checklist or evidence matrix to organise and track the assessment outcomes that have been achieved, but these **do not**, in themselves, constitute evidence of achievement.

An assessor's report or witness statement alone is unlikely to be sufficient evidence of achievement. Reports and statements should always be accompanied by photographic and/or video evidence or sit alongside real workplace documents produced by the candidate.

The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Title:		Climate Change and Energy Management		Level:	7
Unit Number:		R/651/4487	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the scientific principles underlying climate change.	1.1	Analyse the greenhouse effect and its role in global warming.		
		1.2	Describe the key scientific evidence supporting climate change, including temperature records, ice core data, and satellite data.		
		1.3	Discuss the role of human activities in the acceleration of climate change, focusing on fossil fuels, deforestation, and industrial processes.		
		1.4	Analyse the impact of natural processes such as volcanic eruptions, ocean currents, and solar radiation on the climate.		
		1.5	Discuss the predicted future impacts of climate change on global ecosystems, human societies, and economies.		
		1.6	Compare the different climate models and their predictions for future climate scenarios.		
2	Assess the social, economic, and political implications of climate change.	2.1	Identify and evaluate the potential social impacts of climate change on communities, including migration, displacement, and health risks.		
		2.2	Analyse the economic costs of climate change, including damage to infrastructure, loss of biodiversity, and shifts in agriculture and water resources.		
		2.3	Analyse the role of international climate agreements (e.g., the Paris Agreement) in addressing global climate change.		
		2.4	Discuss the political challenges in implementing climate change mitigation strategies at national and international levels.		

2	<i>Continued</i>	2.5	Evaluate the influence of climate change on global power dynamics, particularly in relation to energy production and resource management.
		2.6	Discuss the role of climate justice and equity in climate change adaptation and mitigation policies.
3	Develop strategies for energy management in the context of climate change.	3.1	Analyse the principles of energy efficiency and conservation in the context of climate change mitigation.
		3.2	Identify renewable energy sources (solar, wind, hydro, geothermal) and assess their suitability for different regions and sectors.
		3.3	Evaluate the feasibility and effectiveness of energy management systems in reducing carbon emissions.
		3.4	Discuss the role of energy storage technologies and smart grids in supporting renewable energy integration.
		3.5	Analyse the potential for energy decentralization and the development of community-based energy solutions.
		3.6	Suggest energy management policies for governments, organizations, and industries aimed at reducing the carbon footprint.
4	Critically evaluate the role of policy and regulation in climate change mitigation and energy management.	4.1	Analyse the role of national governments in implementing climate change policies and energy regulations.
		4.2	Evaluate the effectiveness of international climate agreements and their impact on policy-making.
		4.3	Discuss the role of environmental regulations in shaping energy management strategies.
		4.4	Discuss the barriers to effective policy implementation in addressing climate change, including political, economic, and technological challenges.

4	<i>Continued</i>	4.5	Examine the role of public and private sectors in promoting sustainable energy use and environmental protection.
		4.6	Evaluate the policy approaches of different countries in managing energy use and reducing carbon emissions.
5	Design and implement a climate change and energy management plan for an organisation.	5.1	Produce a baseline assessment of an organization's carbon footprint and energy consumption.
		5.2	Produce a set of practical, achievable energy-saving measures based on an organization's operational needs and constraints.
		5.3	Produce a strategy for integrating renewable energy solutions into the organization's energy mix.
		5.4	Suggest a framework for monitoring and reporting energy usage, emissions, and sustainability progress.
		5.5	Analyse the financial and operational implications of implementing energy-saving and emission-reducing measures.
		5.6	Discuss the role of employee engagement and organizational culture in the successful implementation of energy management strategies.
6	Analyse the technological innovations in climate change mitigation and energy management.	6.1	Discuss emerging technologies in energy production, including advanced nuclear power, carbon capture, and energy storage solutions.
		6.2	Discuss the potential of digital technologies (e.g., AI, IoT) in optimizing energy management systems.
		6.3	Analyse the role of energy-efficient technologies in reducing carbon footprints, such as LED lighting, efficient HVAC systems, and electric vehicles.
		6.4	Evaluate the effectiveness of climate engineering technologies, such as geoengineering, in mitigating climate change.

6	<i>Continued</i>	6.5	Discuss the challenges and risks associated with implementing innovative technologies in the context of climate change.
		6.6	Analyse the potential for scaling up green technologies globally and their role in reducing greenhouse gas emissions.
7	Evaluate the challenges and opportunities of transitioning to a low-carbon economy.	7.1	Discuss the economic challenges and opportunities presented by the transition to a low-carbon economy.
		7.2	Discuss the role of innovation and technological development in facilitating the transition to a sustainable energy system.
		7.3	Evaluate the social impacts of transitioning to a low-carbon economy, including job creation and loss in traditional industries.
		7.4	Discuss the role of financial mechanisms (e.g., carbon pricing, subsidies) in supporting the low-carbon transition.
		7.5	Analyse the geopolitical implications of moving to a low-carbon economy, focusing on energy security and global trade.
		7.6	Identify potential policy strategies that can facilitate a smooth transition while ensuring social equity and inclusion.
8	Propose strategies for adapting to the impacts of climate change.	8.1	Analyse the vulnerability of different regions, sectors, and communities to climate change impacts.
		8.2	Produce adaptation strategies that enhance resilience to climate-related risks (e.g., flooding, heatwaves, drought).
		8.3	Discuss the role of nature-based solutions such as reforestation and wetland restoration in climate adaptation.
		8.4	Analyse the integration of climate change adaptation measures into urban planning and infrastructure development.

8	<i>Continued</i>	8.5	Evaluate the role of public health measures in adapting to climate change, particularly in relation to heat stress, disease, and air quality.
		8.6	Suggest strategies for climate change adaptation in agriculture, water management, and disaster risk reduction.

Additional Assessment Information

Learning outcomes 1, 2, 3, 4, 6, 7 and 8 are **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Learning Outcome 5 is **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
- Production of organisational documents.

An observation report and witness testimony are differentiated as follows:

- An **assessor's report** is completed by a qualified assessor who observes the candidate carrying out practical work. The assessor will make assessment decisions as they observe and record these in the report, alongside a commentary of what they observe.
- A **witness statement** is completed by a suitably qualified or experienced expert who observes the candidate carrying out practical work. The witness statement will contain **only** a commentary of what has been observed. An assessor must then use the witness statement, alongside any additional evidence to make assessment decisions.
- In all cases, an assessor's report is preferred as evidence over a witness statement; as it is always better for an assessor to observe a candidate live.

Assessors may wish use to use a checklist or evidence matrix to organise and track the assessment outcomes that have been achieved, but these **do not**, in themselves, constitute evidence of achievement.

An assessor's report or witness statement alone is unlikely to be sufficient evidence of achievement. Reports and statements should always be accompanied by photographic and/or video evidence or sit alongside real workplace documents produced by the candidate.

The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Title:		Environmental Management Systems		Level:	7
Unit Number:		T/651/4488	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the key principles and standards of Environmental Management Systems (EMS).	1.1	Identify the key principles and objectives of an EMS.		
		1.2	Discuss the role of EMS in environmental protection and sustainability.		
		1.3	Evaluate the impact of EMS on organizational operations and environmental performance.		
		1.4	Analyse the interrelationship between ISO 14001 and other environmental management frameworks.		
		1.5	Explain the purpose and benefits of certification in EMS.		
		1.6	Discuss how EMS standards are applied in different industries.		
2	Analyse the structure and components of an EMS.	2.1	Describe the structure of a typical EMS, including its framework and processes.		
		2.2	Identify the main components of an EMS such as policy, planning, implementation, checking, and management review.		
		2.3	Discuss the role of risk assessment in the EMS framework.		
		2.4	Explain the importance of continuous improvement in EMS.		
		2.5	Analyse the interaction between the EMS components and business processes.		
		2.6	Evaluate how an EMS integrates with other management systems within an organization.		

3	Evaluate the process of planning, implementing, and maintaining an EMS.	3.1	Explain the steps involved in planning an EMS.
		3.2	Identify the resources required for EMS implementation.
		3.3	Discuss the role of leadership and commitment in the successful implementation of EMS.
		3.4	Describe the process of monitoring, measuring, and reviewing the EMS performance.
		3.5	Discuss the process of internal auditing and its role in EMS maintenance.
		3.6	Discuss the challenges of maintaining and improving an EMS in organizations.
4	Develop strategies for EMS implementation in organizations.	4.1	Analyse the environmental context of an organization before implementing EMS.
		4.2	Identify key stakeholders involved in the EMS implementation process.
		4.3	Produce strategies to align EMS with organizational goals and objectives.
		4.4	Produce a risk management strategy to address potential environmental impacts.
		4.5	Produce a communication plan for engaging stakeholders in EMS.
		4.6	Produce a timeline and action plan for the effective implementation of EMS.
5	Evaluate the role of compliance and legal frameworks in EMS.	5.1	Analyse the relationship between legal compliance and EMS.
		5.2	Identify key environmental regulations that affect EMS in different jurisdictions.
		5.3	Discuss the impact of non-compliance on an organization's environmental and financial performance.
		5.4	Evaluate the role of internal audits in ensuring compliance with environmental laws and regulations.
		5.5	Discuss the implications of environmental liabilities for businesses.
		5.6	Discuss the role of external certification bodies in ensuring legal compliance within EMS.

6	Assess the environmental performance of an EMS.	6.1	Identify key performance indicators (KPIs) to measure the effectiveness of an EMS.
		6.2	Discuss how environmental performance is tracked and reported within an organization.
		6.3	Evaluate the environmental impacts of the organization before and after EMS implementation.
		6.4	Discuss the role of data analysis in improving environmental performance.
		6.5	Analyse the contribution of EMS to the reduction of carbon footprint, waste, and resource consumption.
		6.6	Discuss the long-term sustainability of the EMS in relation to environmental goals.
7	Examine the role of continual improvement and feedback in EMS.	7.1	Explain the importance of continual improvement in the EMS framework.
		7.2	Discuss tools and techniques used to identify opportunities for improvement.
		7.3	Analyse the role of employee engagement in continuous improvement processes.
		7.4	Evaluate the effectiveness of management reviews in driving continual improvement.
		7.5	Analyse the impact of feedback loops in refining EMS.
		7.6	Identify the relationship between continual improvement and organizational sustainability goals.
8	Demonstrate the ability to audit and evaluate an EMS.	8.1	Explain the process of conducting an EMS audit.
		8.2	Discuss the key areas to focus on during an EMS audit.
		8.3	Evaluate the effectiveness of corrective actions and preventive actions (CAPA) within EMS.
		8.4	Discuss how audit findings are communicated and managed.
		8.5	Discuss the role of third-party audits in ensuring the credibility of EMS.
		8.6	Suggest improvements based on EMS audit findings to enhance its effectiveness.

Additional Assessment Information

Learning outcomes 1, 2, 3, 5, 6, 7 and 8 are **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Learning Outcome 4 is **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
- Production of organisational documents.

An observation report and witness testimony are differentiated as follows:

- An **assessor's report** is completed by a qualified assessor who observes the candidate carrying out practical work. The assessor will make assessment decisions as they observe and record these in the report, alongside a commentary of what they observe.
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- In all cases, an assessor's report is preferred as evidence over a witness statement; as it is always better for an assessor to observe a candidate live.

Assessors may wish use to use a checklist or evidence matrix to organise and track the assessment outcomes that have been achieved, but these **do not**, in themselves, constitute evidence of achievement.

An assessor's report or witness statement alone is unlikely to be sufficient evidence of achievement. Reports and statements should always be accompanied by photographic and/or video evidence or sit alongside real workplace documents produced by the candidate.

The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Title:		Sustainable Resource and Waste Management		Level:	7
Unit Number:	Y/651/4489	TQT:	120	GLH:	60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Evaluate sustainable resource management strategies.	1.1	Discuss the principles of sustainable resource management, including reducing resource consumption and waste generation.		
		1.2	Evaluate global and local policies, frameworks, and initiatives that promote resource efficiency.		
		1.3	Analyse the role of circular economy principles in reducing waste and enhancing resource sustainability.		
		1.4	Analyse the application of renewable resources and their effectiveness in reducing environmental impact.		
		1.5	Compare sustainable resource management strategies across various sectors (e.g., agriculture, industry, urban development).		
2	Analyse the environmental impact of resource consumption.	2.1	Discuss the environmental effects of resource extraction, production, and consumption processes.		
		2.2	Evaluate the carbon footprint and other ecological impacts of different industries and sectors.		
		2.3	Analyse the relationship between resource consumption and environmental degradation, including air and water pollution, deforestation, and biodiversity loss.		
		2.4	Analyse the potential environmental costs of waste generation and how they can be minimized.		
		2.5	Discuss methods for reducing resource consumption at the individual, organizational, and governmental levels.		

3	Evaluate waste management systems and strategies.	3.1	Analyse different waste management techniques, including recycling, incineration, and landfill disposal.
		3.2	Compare the advantages and disadvantages of various waste management systems in terms of sustainability.
		3.3	Evaluate the effectiveness of waste minimization strategies, such as product redesign, reduction at source, and extended producer responsibility.
		3.4	Analyse the role of public and private sector involvement in waste management systems and their impact on sustainability.
		3.5	Discuss the regulatory frameworks and policies that govern waste management practices in different regions.
4	Design a sustainable waste management system for a specific sector.	4.1	Identify the key waste streams and challenges within a specific sector (e.g., construction, agriculture, manufacturing).
		4.2	Produce a comprehensive waste management strategy that addresses waste reduction, recycling, and disposal, including integration of the circular economy.
		4.3	Analyse the feasibility and environmental impact of the proposed waste management system.
		4.4	Identify the stakeholders involved and propose collaboration strategies for implementing the waste management system.
5	Assess the role of policy, legislation, and economics in resource and waste management.	5.1	Analyse the role of national and international policies in promoting sustainable resource use and waste reduction.
		5.2	Evaluate the impact of economic instruments (e.g., taxes, subsidies, incentives) on resource and waste management practices.
		5.3	Discuss the role of environmental regulations and enforcement mechanisms in improving waste management practices.
		5.4	Analyse the alignment between governmental policies and private sector goals in sustainability.
		5.5	Evaluate the effectiveness of environmental legislation in achieving long-term sustainability objectives.

6	Investigate the relationship between resource and waste management and social sustainability.	6.1	Analyse how resource and waste management practices impact social equity, health, and well-being.
		6.2	Evaluate community involvement in waste management programs and their role in sustainability outcomes.
		6.3	Discuss the role of education and awareness in shaping public attitudes towards resource conservation and waste reduction.
		6.4	Discuss the impact of waste management practices on vulnerable and marginalized populations.
		6.5	Suggest strategies for improving social acceptance of sustainable waste management practices.
7	Investigate emerging trends and innovations in resource and waste management.	7.1	Analyse current trends in sustainable resource management, such as zero waste, eco-design, and sustainable packaging.
		7.2	Analyse technological innovations that are advancing resource efficiency and waste management (e.g., waste-to-energy technologies, AI in recycling).
		7.3	Discuss the potential of new materials and technologies to reduce resource use and environmental impact.
		7.4	Discuss the future role of digital technologies, such as the Internet of Things (IoT), in resource and waste management.
		7.5	Evaluate the scalability and long-term sustainability of emerging resource and waste management practices.

8	Formulate a comprehensive sustainability strategy for resource and waste management.	8.1	Produce a strategic framework for sustainable resource management within a specific organization or community.
		8.2	Suggest measurable objectives for waste reduction, resource efficiency, and sustainability within the strategy.
		8.3	Evaluate the integration of key sustainability principles, including resource conservation, social equity, and economic viability.
		8.4	Discuss the potential barriers to implementing the sustainability strategy and propose solutions.
		8.5	Produce a monitoring and reporting mechanism to track progress and ensure continuous improvement in sustainability goals.

Additional Assessment Information

This unit is **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Title:		Environmental Economics		Level:	7
Unit Number:		F/651/4490	TQT:	120	GLH: 60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the fundamental concepts and principles of environmental economics.	1.1	Define key terms related to environmental economics, such as externalities, public goods, and market failure.		
		1.2	Discuss the role of environmental economics in understanding the interaction between economic systems and the environment.		
		1.3	Explain the concept of the "polluter pays principle" and its application in policy making.		
		1.4	Analyse how environmental economics can contribute to sustainable development.		
		1.5	Analyse the market-based approaches to environmental protection, such as cap-and-trade systems and carbon taxes.		
		1.6	Discuss the differences between traditional and environmental economics approaches.		
2	Evaluate the relationship between economic growth and environmental degradation.	2.1	Explain the theory of environmental Kuznets curve and its implications for policy.		
		2.2	Analyse how economic growth can lead to both positive and negative environmental impacts.		
		2.3	Discuss the role of technological advancement in mitigating the negative effects of economic growth on the environment.		
		2.4	Evaluate the concept of decoupling economic growth from environmental degradation.		
		2.5	Discuss the implications of globalization on environmental sustainability.		
		2.6	Analyse how different economic systems influence the relationship between growth and the environment.		

3	Assess the role of environmental policies in promoting sustainable economic development.	3.1	Evaluate the effectiveness of environmental policies, such as regulations and market-based incentives, in promoting sustainability.
		3.2	Discuss the concept of sustainable development and how environmental policies align with it.
		3.3	Analyse the role of government intervention in correcting market failures related to environmental degradation.
		3.4	Assess the impact of international environmental agreements and policies on global sustainability.
		3.5	Examine the role of environmental economics in shaping national and global policy on climate change.
		3.6	Critically assess the strengths and weaknesses of various environmental policies, including subsidies, taxes, and tradeable permits.
4	Analyse the concept of natural resource economics and its impact on environmental management.	4.1	Define natural resource economics and its key principles.
		4.2	Discuss the role of renewable and non-renewable resources in economic decision-making.
		4.3	Evaluate the economic tools used to manage common-pool resources, such as resource allocation and pricing strategies.
		4.4	Analyse the concept of the tragedy of the commons and suggest policy solutions to mitigate it.
		4.5	Evaluate the effectiveness of resource management strategies in balancing economic development and environmental conservation.
		4.6	Analyse the implications of resource scarcity and depletion on future economic growth and environmental sustainability.

5	Understand the economic valuation of environmental goods and services.	5.1	Explain the methods used for valuing environmental goods and services, such as contingent valuation, hedonic pricing, and travel cost method.
		5.2	Discuss the challenges involved in placing a monetary value on environmental resources.
		5.3	Evaluate the importance of environmental valuation in policymaking and cost-benefit analysis.
		5.4	Analyse the role of ecosystem services in economic decision-making and their contribution to human well-being.
		5.5	Discuss how valuation techniques can influence environmental conservation policies.
		5.6	Discuss the ethical considerations in valuing non-market environmental goods and services.
6	Assess the economic impacts of environmental degradation and climate change.	6.1	Analyse the economic costs of environmental degradation, including direct and indirect costs.
		6.2	Evaluate the impact of climate change on various sectors, such as agriculture, industry, and human health.
		6.3	Analyse the effectiveness of economic tools, such as carbon pricing and subsidies for green technologies, in mitigating climate change.
		6.4	Discuss the role of adaptation and mitigation strategies in reducing the economic impacts of climate change.
		6.5	Evaluate the economic implications of transitioning to a low-carbon economy.
		6.6	Analyse the economic challenges and opportunities associated with addressing climate change at the global level.

7	Examine the role of environmental economics in promoting corporate social responsibility (CSR).	7.1	Define corporate social responsibility (CSR) and its relevance to environmental economics.
		7.2	Analyse how businesses can integrate environmental sustainability into their economic strategies.
		7.3	Discuss the economic benefits and challenges of adopting CSR practices.
		7.4	Evaluate the role of environmental economics in encouraging corporate investment in environmental protection.
		7.5	Discuss the impact of CSR on corporate reputation, consumer behaviour, and long-term profitability.
		7.6	Analyse case studies of companies implementing successful environmental economic strategies and CSR initiatives.
8	Critically analyse global environmental economic issues and their solutions.	8.1	Discuss major global environmental challenges, such as deforestation, ocean pollution, and loss of biodiversity.
		8.2	Discuss the role of international organizations, such as the United Nations and the World Bank, in addressing global environmental issues.
		8.3	Evaluate the role of environmental economics in proposing global solutions to environmental problems.
		8.4	Analyse the economic and environmental trade-offs involved in addressing global challenges like climate change and resource depletion.
		8.5	Evaluate the effectiveness of global economic agreements, such as the Paris Agreement, in addressing environmental issues.
		8.6	Suggest potential solutions based on environmental economics to mitigate global environmental challenges.

Additional Assessment Information

This unit is **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Title:		Environmental Auditing and Reporting		Level:	7
Unit Number:	H/651/4491	TQT:	120	GLH:	60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the principles and frameworks of environmental auditing.	1.1	Explain the concept of environmental auditing in the context of environmental management.		
		1.2	Identify and describe key frameworks and standards for conducting environmental audits.		
		1.3	Discuss the benefits of environmental auditing for organizations and communities.		
		1.4	Evaluate different types of environmental audits (e.g., compliance audit, management system audit, environmental performance audit).		
		1.5	Identify legal and regulatory requirements for conducting environmental audits in various sectors.		
		1.6	Discuss the role of environmental auditing in achieving sustainability goals.		
		1.7	Explain the importance of objectivity and impartiality in the audit process.		
		1.8	Analyse the relationship between environmental auditing and corporate social responsibility (CSR).		
2	Develop a methodology for conducting an environmental audit.	2.1	Produce a comprehensive environmental audit plan that includes objectives, scope, and criteria.		
		2.2	Design audit tools and techniques appropriate for different environmental audits.		
		2.3	Identify relevant indicators and metrics to measure environmental performance.		
		2.4	Apply risk assessment techniques to determine the priority areas for auditing.		
		2.5	Describe the process of data collection, analysis, and reporting in an environmental audit.		

2	<i>Continued</i>	2.6	Integrate stakeholder perspectives and consult with affected parties during the audit planning process.
		2.7	Use software and other tools for managing audit data and reporting results.
		2.8	Ensure the audit methodology adheres to international standards and best practices.
3	Conduct an environmental audit in a professional setting.	3.1	Plan and prepare for the environmental audit, including resource allocation, stakeholder engagement, and timeline management.
		3.2	Conduct site visits to assess environmental performance, including waste management, emissions, and resource use.
		3.3	Collect and analyse data on environmental performance using appropriate methods and tools.
		3.4	Evaluate compliance with environmental laws and regulations during the audit.
		3.5	Identify environmental risks and non-compliance issues through systematic observation and data analysis.
		3.6	Collaborate with audit teams and communicate effectively during the audit process.
		3.7	Produce and present a detailed audit report that includes findings, recommendations, and an action plan for improvement.
		3.8	Ensure transparency and accuracy throughout the audit process, maintaining detailed records and supporting evidence.

4	Analyse the findings of an environmental audit and make recommendations for improvement.	4.1	Interpret the results of environmental audits to identify key strengths and weaknesses in environmental management.
		4.2	Analyse audit findings against environmental performance indicators and benchmarks.
		4.3	Assess the significance of non-compliance issues and environmental risks identified in the audit.
		4.4	Propose corrective and preventive actions to address identified deficiencies in environmental practices.
		4.5	Evaluate the potential environmental, economic, and social impacts of proposed recommendations.
		4.6	Develop a cost-benefit analysis for recommended actions based on available resources.
		4.7	Consult with stakeholders to refine and prioritize recommendations.
		4.8	Ensure that recommendations align with organizational sustainability goals and regulatory requirements.
5	Understand the principles of environmental reporting and communication.	5.1	Explain the purpose and importance of environmental reporting for organizations and stakeholders.
		5.2	Identify key reporting frameworks (e.g., Global Reporting Initiative, Sustainability Reporting Standards, CDP).
		5.3	Discuss the legal and ethical requirements for environmental reporting.
		5.4	Discuss the different audiences for environmental reports (e.g., management, regulators, public).
		5.5	Analyse different forms of environmental reporting (e.g., annual sustainability reports, compliance reports).
		5.6	Ensure the accuracy and transparency of environmental data presented in reports.

5	Continued	5.7	Discuss the role of environmental reporting in driving organizational accountability and improvement.
		5.8	Identify best practices in environmental communication to enhance stakeholder engagement.
6	Prepare an environmental audit report.	6.1	Compile audit data into a structured environmental audit report.
		6.2	Provide clear and objective findings supported by evidence from the audit process.
		6.3	Assess the level of compliance with relevant environmental laws, regulations, and standards.
		6.4	Present audit results in a clear and comprehensible manner suitable for different stakeholders.
		6.5	Make actionable recommendations based on audit findings, with clear timelines and responsible parties.
		6.6	Ensure the report complies with reporting standards and international best practices.
		6.7	Ensure the report is designed to promote transparency and accountability in environmental performance.
		6.8	Address the key concerns of stakeholders by tailoring the report's content and format to its audience.
7	Critically evaluate the effectiveness of environmental auditing and reporting systems.	7.1	Analyse the strengths and weaknesses of current environmental auditing and reporting systems in practice.
		7.2	Evaluate the effectiveness of audit recommendations in achieving long-term environmental improvements.
		7.3	Discuss the limitations of auditing processes in capturing all aspects of environmental performance.
		7.4	Discuss the impact of external factors (e.g., economic, social, political) on environmental auditing and reporting.

7	Continued	7.5	Analyse the role of technology in enhancing the accuracy and efficiency of environmental audits and reports.
		7.6	Evaluate stakeholder feedback on audit outcomes and reports to measure their effectiveness in driving change.
		7.7	Suggest improvements to auditing and reporting systems to enhance their effectiveness in addressing contemporary environmental challenges.
		7.8	Analyse the role of auditing and reporting in achieving organizational sustainability and corporate responsibility goals.

Additional Assessment Information

Learning outcome 1 is **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

The remaining learning outcomes are **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
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The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Title:		Research Methods in Environmental Management		Level:	7
Unit Number:	J/651/4492	TQT:	120	GLH:	60
Learning Outcomes <i>The learner will be able to:</i>		Assessment Criteria <i>The learner can:</i>			
1	Understand the principles and methods of environmental research.	1.1	Define the core principles of environmental research methodologies.		
		1.2	Explain the difference between qualitative and quantitative research methods in the environmental context.		
		1.3	Identify and explain the significance of different data collection techniques used in environmental research.		
		1.4	Discuss the ethical considerations involved in environmental research.		
		1.5	Discuss the relationship between research design and the outcomes of environmental studies.		
		1.6	Analyse the reliability and validity of research in environmental management.		
2	Evaluate the design of research in environmental management.	2.1	Analyse the steps in designing a research project, including problem identification and hypothesis formulation.		
		2.2	Discuss the suitability of different research methodologies (qualitative vs. quantitative) for various environmental issues.		
		2.3	Explain the importance of sampling methods and how they influence the outcome of environmental studies.		
		2.4	Compare different data collection tools and methods used in environmental management research.		

3	Critically analyse existing environmental research and data.	3.1	Analyse environmental research studies, identifying strengths and weaknesses.
		3.2	Discuss the findings of relevant environmental studies and compare them with other research.
		3.3	Analyse the credibility and reliability of environmental data from secondary sources.
		3.4	Identify trends and patterns in environmental research and explain their significance.
		3.5	Discuss how existing research influences policy and decision-making in environmental management.
4	Understand the role of research in environmental policy and decision-making.	4.1	Explain how environmental research contributes to policy development and decision-making.
		4.2	Identify key stakeholders in environmental research and their role in the decision-making process.
		4.3	Evaluate the influence of research on sustainable environmental practices and regulations.
		4.4	Analyse case studies where research has shaped environmental policy or management strategies.
		4.5	Discuss the challenges of integrating research findings into policy and practice.
		4.6	Analyse the long-term impact of research findings on environmental policies at local, national, and international levels.
5	Develop and implement environmental research projects.	5.1	Develop a comprehensive environmental research proposal, including objectives, methods, and expected outcomes.
		5.2	Justify the selection of research design based on the research objectives.
		5.3	Design a detailed work plan for conducting environmental research, including timelines and resources needed.
		5.4	Implement research projects in real-world environmental settings while adhering to ethical standards.
		5.5	Demonstrate the ability to collect and manage environmental data effectively.

5	<i>Continued</i>	5.6	Apply problem-solving techniques in addressing challenges faced during the research process.
		5.7	Monitor and evaluate the progress of an environmental research project, adjusting as necessary.
6	Demonstrate knowledge of statistical techniques for environmental research.	6.1	Identify various statistical methods used in environmental research and their applications.
		6.2	Apply basic statistical techniques such as correlation, regression, and hypothesis testing to environmental data.
		6.3	Use software tools for analysing environmental data sets
		6.4	Interpret statistical results in the context of environmental management decisions.
		6.5	Assess the limitations of using statistical methods in complex environmental systems.
		6.6	Develop statistical models to predict environmental outcomes based on research data.
7	Communicate research findings effectively to a range of audiences.	7.1	Present research findings through well-structured written reports, following academic conventions.
		7.2	Use visual aids to enhance the presentation of research data.
		7.3	Communicate complex environmental research concepts in a clear and accessible way to non-specialist audiences.
		7.4	Deliver oral presentations of research findings, demonstrating effective communication and engagement with the audience.
		7.5	Write policy briefs or recommendations based on research findings, tailored to the needs of policymakers and stakeholders.
		7.6	Demonstrate the ability to adapt research findings for different platforms (e.g., academic journals, public reports, media).

8	Reflect on the research process and the ethical dimensions of environmental management research.	8.1	Identify and reflect on the key ethical challenges in conducting environmental research.
		8.2	Discuss the implications of environmental research on human and ecological systems.
		8.3	Discuss the impact of researcher bias on research outcomes.
		8.4	Evaluate the role of ethical guidelines in ensuring the integrity of environmental research.
		8.5	Discuss on personal learning and development throughout the research process.
		8.6	Suggest strategies for addressing ethical dilemmas encountered in environmental management research.

Additional Assessment Information

Learning outcomes 1 – 4 are **knowledge based**. This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Learning outcomes 5 - 8 are **competency based**. This means that the candidate is expected to perform the tasks, and demonstrate the level of competence, outlined in the assessment criteria. It is expected that evidence will be a combination following:

- Photographic and/or video evidence of the candidate's practical work.
- Assessor's observation report.
- Expert witness testimony.
- Candidate reflection on own practical work.
- Production of organisational documents.

An observation report and witness testimony are differentiated as follows:

- An **assessor's report** is completed by a qualified assessor who observes the candidate carrying out practical work. The assessor will make assessment decisions as they observe and record these in the report, alongside a commentary of what they observe.
- A **witness statement** is completed by a suitably qualified or experienced expert who observes the candidate carrying out practical work. The witness statement will contain **only** a commentary of what has been observed. An assessor must then use the witness statement, alongside any additional evidence to make assessment decisions.
- In all cases, an assessor's report is preferred as evidence over a witness statement; as it is always better for an assessor to observe a candidate live.

Assessors may wish use to use a checklist or evidence matrix to organise and track the assessment outcomes that have been achieved, but these **do not**, in themselves, constitute evidence of achievement.

An assessor's report or witness statement alone is unlikely to be sufficient evidence of achievement. Reports and statements should always be accompanied by photographic and/or video evidence or sit alongside real workplace documents produced by the candidate.

The evidence produced by candidates may be real work they have produced in the course of their employment or may be based on case studies and "simulated" scenarios.

Appendix One – Command Verb Definitions

The table below explains what is expected from each **command verb** used in an assessment objective. Not all verbs are used in this specification

Apply	Use existing knowledge or skills in a new or different context.
Analyse	Break a larger subject into smaller parts, examine them in detail and show how these parts are related to each other. This may be supported by reference to current research or theories.
Classify	Organise information according to specific criteria.
Compare	Examine subjects in detail, giving the similarities and differences.
Critically Compare	As with compare, but extended to include pros and cons of the subject. There may or may not be a conclusion or recommendation as appropriate.
Describe	Provide detailed, factual information about a subject.
Discuss	Give a detailed account of a subject, including a range of contrasting views and opinions.
Explain	As with describe, but extended to include causation and reasoning.
Identify	Select or ascertain appropriate information and details from a broader range of information or data.
Interpret	Use information or data to clarify or explain something.
Produce	Make or create something.
State	Give short, factual information about something.
Specify	State a fact or requirement clearly and in precise detail.



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