N12/4/ENVSO/SP2/ENG/TZ0/XX/M

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MARKSCHEME

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ENVIRONMENTAL SYSTEMS AND SOCIETIES

Standard Level

Paper 2

22 pages

Subject Details: Environmental Systems and Societies SLP2 Markscheme

Mark Allocation

Candidates are required to answer **ALL** questions in Section A **[25 marks]** and **TWO** questions in Section B **[40 marks]**. Maximum total = **[65 marks]**.

1. A markscheme often has more marking points than the total allows. This is intentional.

2. Each marking point has a separate line and the end is shown by means of a semicolon (;).

3. An alternative answer or wording is indicated in the markscheme by a slash (/). Either wording can be accepted.

4. Words in brackets ( ) in the markscheme are not necessary to gain the mark.

5. Words that are underlined are essential for the mark.

6. The order of marking points does not have to be as in the markscheme, unless stated otherwise.

7. If the candidate's answer has the same "meaning" or can be clearly interpreted as being of equivalent significance, detail and validity as that in the markscheme then award the mark. Where this point is considered to be particularly relevant in a question it is emphasized by ***OWTTE*** (or words to that effect).

8. Remember that many candidates are writing in a second language. Effective communication is more important than grammatical accuracy.

9. Occasionally, a part of a question may require an answer that is required for subsequent marking points. If an error is made in the first marking point then it should be penalized. However, if the incorrect answer is used correctly in subsequent marking points then **follow through** marks should be awarded. When marking, indicate this by adding **ECF** (error carried forward) on the script.

10. Do **not** penalize candidates for errors in units or significant figures, **unless** it is specifically referred to in the markscheme.

SECTION A

1. (a) (i) meandering part of the river / near the delta; ***[1]***

(ii) lower summer water temperatures in straight part / higher in meandering part;
BOD is lower in straight part / higher in meandering part;
lower amount of suspended sediment in straight part / higher in meandering part;
higher velocity in straight part / lower in meandering; ***[3 max]***

(b) (i) the Sulina channel;
for navigation purposes/increase available land / land suitable for agriculture/reduces flood risk; ***[2]***

(ii) *biotic factors*:
changes in habitat for fish species / decrease in bream / increase in trout;
reduced dead organic matter/BOD;
increase in invasive species from shipping;
loss of aquatic plants/benthic species through dredging/decreased biodiversity;

abiotic factors:
faster flow rates;
reduced BOD;
lower water temperatures;
less sediment;
effects of increased shipping with pollution/bank erosion etc;
change in pH from emissions from machinery; ***[3 max]***
*Award **[2 max]** if only abiotic factors suggested.*

(c) (i) $\frac{29.2-41.3}{41.3}\times 100\%$ / $\frac{41.3-29.2}{41.3}\times 100\%$ / $\frac{12.1}{42.3}\times 100\%$;

if figures slightly wrong but correct method;
(–)29.3%/29.29/ 29.2978;

BUT not 29.2(they should round up not down) ***[2]***

(ii) reduction in the height of the delta;
decreased expanse of the delta;
the delta cannot be maintained without continuous flow of sediment;
reduction in available minerals/productivity/habitats of the delta; ***[2 max]***

(d) number of species breeding is highest when river discharge is highest / lowest when discharge is lowest;
directly related / is a dependent relationship;
may be correlation rather than cause and effect; ***[2 max]***

(e) reduced volume for other uses such as domestic/hydro/industrial/other use;
reduced flow/discharge of freshwater into the Black Sea / increasing salinity of the Black Sea;
reduction in freshwater habitat/species;
volume is reduced(by a quarter) but the constant flow and fluctuations will minimise the issue;
water scarcity;
reduced discharge will cause reduction in fish breeding; ***[1 max]***

(f) *renewable*:
fish / reeds / birds for food/crops;
Accept any other reasonable response.

replenishable:
domestic water use / hydropower;
water taken from/extracted from the river/Danube; ***[2 max]***
Accept any other reasonable response.

(g) identifying a relevant example of natural income;
for example natural income provided by eg fishing/hydropower/water supply/food;
for sustainability, resources must be consumed at a rate that does not reduce natural capital / exceed natural income;
shipping/dredging may reduce/damage natural capital (which is not sustainable);
water extraction/irrigation/livestock may reduce natural capital (which is not sustainable);
damming/flood control / may reduce natural capital (which is not sustainable);
for fishing to be sustainable, only natural income/population growth should be harvested;
for tourism to be sustainable it must not reduce/damage natural capital;
increased human population will abstract/remove more water for domestic/agricultural use; ***[4 max]***

(h) community support;
adequate funding;
effective management e.g. control of invasive species/fishing/tourism/water usage/pollution;
increasing awareness through scientific research/education/ecotourism;
biogeographical features e.g. size / shape / edge effects / corridors and proximity to human settlement/activity;
effective laws/legal framework/legislation/policing by the government for creating reserves/parks;
a range of ecosystems/habitats/biodiversity included in area; ***[3 max]***

SECTION B

General Essay Markscheme

Each essay is marked out of ***[20]*** of which ***[2]*** are for clarity of expression, structure and development of ideas.

[0] Quality of expression, structure and development is poor.
[1] Quality of expression, structure and development is limited.
[2] Quality of expression is clear, structure is good and ideas are well developed.

*Do not penalize candidates for writing in bullet pointed lists – if this technique is used appropriately i.e. to summarize or outline a list of points within an essay at an appropriate point. However, a candidate who has not shown **any** evidence of being able to write a paragraph with a developed, logical line of reasoning would not be able to achieve maximum marks.*

2. (a) name (*e.g.* ozone depletion / biodiversity loss / population growth / sustainable development / groundwater depletion/DDT in water);

e.g. Ozone depletion

Outline of issue:
caused by release of CFCs in aerosols/refrigerators / NOx from fossil fuels;
react with ozone to break it up;
causes 'holes' in ozone layer;
lets through ultraviolet/UV radiation;

why it is a global problem:
damaging to wildlife/ecosystems/coral reefs etc.;
...that contribute significantly to global biodiversity;
damaging to marine phytoplankton;
...that is the major primary producer of biosphere;
damaging to human populations around the world;
as it contributes to increased health costs/social and economic impacts of skin cancer and eye damage;
caused by fossil fuel use/increased consumerism of CFC products throughout the world;
and CFCs in MEDCs initially (until Montreal Protocol);
...and still in some LEDCs ***[5 max]***

e.g. biodiversity loss

Outline of issue:
Biodiversity lost by human activity directly: habitat destruction / pollution / agricultural/urban development / hunting/harvesting;
...and indirectly: global warming / climate change / flooding;
which reduces stability of biosphere;
...and availability of human resources , *for example,* food/drugs;

why it is a global problem:
Increase in global human population ...;
...leads to development all over the world;
...and increased demands on biotic resources everywhere;
...and higher levels of pollution affecting global systems of atmosphere/oceans;
Survival of ecosystems are important in maintaining global climate;
for example significance of rainforests in managing greenhouse effect; ***[5 max]***

*Award **[3 max]** if either the outline or global argument is omitted.*
*Award **[3 max]** if no specific example named, this includes inappropriate examples eg 'pollution' (too broad), 'resource usage' (too vague), 'acid rain' (regional, not global).*
*If global warming is used as the example award **zero** credit. However use ecf (error carried forward) for part b and c of the question, if the have reasonable answers and effectively use global warming as the example.*

(b) *Issue addressed: for example, ozone depletion*

International level:
policy/legislation/action:
Montreal Protocol in 1987;
technological development to replace CFCs with HFCs;

Evaluation:
proposed elimination of CFCs however not all countries followed the schedule;
reduction of 50% by 1999 which some countries met earlier;
further meetings in London and Copenhagen to eliminate CFCs entirely by 2000;
...with recognition that ELDCs needed more time;
HFCs a greenhouse gas, so cause other problems;
substitution of CFCs highly effective as ozone levels recovering;
however variable reports on ozone recovery;

National level:
policy/legislation/action:
signing of international agreement;
national legislation/incentives for industries and population to comply;
investment in alternative energy to reduce NO_x /ozone depletion from fossil fuels;

Evaluation:
highly effective policy as CFCs largely phased out in many countries;
countries found this an easy policy to implement as few changes needed/substitutes available;
CFCs are smuggled, so criminal/illegal parties involved;
ELDCs cannot always meet cost of alternative energy technology;
nations often committed to fossil fuel based technology;

Local level:
Policy/legislation/action:
lifestyle choices eg avoiding products that utilise CFCs;
...energy conservation to reduce fossil fuel use/NO_x release;

Evaluation:
avoiding CFC products no longer an issue in nations where they are banned;
...but was significant before legislation / still is in nations that have not signed agreement;
difficult to persuade changes in lifestyle;

Issue addressed: eg biodiversity loss
International level:

Policy/legislation/action:
CITES/Red List status;
Man and Biosphere Reserves;
WWF activity;

Evaluation (for CITES eg):
difficulty in assigning red list status;
CITES/red list status are species-based approaches and so habitat could be lost;
rely on countries accurately reporting data/bias in data;
politics can become involved/data becomes unreliable;
the policies are relatively easy for the public to understand;
government policy and international body checks - so reliable;
creates legislation for controlling trade in organisms;

National level:
Policy/legislation/action:
national implementation/policing of CITES guidelines;

Evaluation:
different countries have different status for organisms and this can cause conflict;
e.g. trade in ivory is banned, but Southern African countries wish to have some trade;

Local level:
Policy/legislation/action:
raising public awareness of Red Listed species;
local conservation initiatives for endangered species and their habitats;

Evaluation:
engages population/community support for CITES objectives;
applies these objectives at the level where it matters;
does not in itself carry the force of national/international legislation;
may conflict with other community needs/aspirations;

*Award **[3 max]** if only one spatial level (local, national, international) is considered.*
*Award **[4 max]** if response gives only positive, or only negative, evaluations.* ***[7 max]***

(c) *The following are general points of argument between a technocentric and ecocentric approach, and also points specific to the candidate's chosen example. Award 3 max if only general points are made, without reference to specific details of chosen example.*

Points of general argument:

Technocentric advantages:
provides alternatives to individuals that don't inconvenience them;
substitutes materials/inputs and so avoids costly manufacturing/industrial change;
allows economic/social/technological development to continue;

Technocentric disadvantages:
high cost;
technological solutions may give rise to further environmental problems;
allows for/promotes greater resource consumption;

Ecocentric advantages:
approaches may be more sustainable;
does not have to wait for technological developments to occur;
raises general environmental awareness in population/communities;

Ecocentric disadvantages:
requires individual change, which can be difficult to encourage;
may hinder economic growth and development;

Points relevant to chosen example:

for example. CFCs and ozone depletion
Technocentric approach:
would replace CFCs with other chemicals that are not destructive to ozone;
would develop appliances/aerosols etc. that do not require harmful chemicals;
...but the substitutes can also be harmful to the environment;
...and substituting does not solve the problem of consumerism;

Ecocentric approach:
would recommend reduced use of refrigeration/air-conditioning/aerosols;
would recommend reduced use of fossil fuels that release NOx;
...through energy conservation e.g. communal transport/low technology;
but these are dependent on changes in individual attitude/lifestyle and cannot easily be
centrally managed;
...so that extent of solution is likely to be limited/localised;

for example Biodiversity loss:
Technocentric approach:
would focus on conserving diversity for human resources (e.g. drugs/food etc);
would use technology for genebanks/genetic engineering to conserve genetic diversity;
...but would have less concern for intrinsic/ethical rights of biodiversity;
...and less concern for local habitats/ecosystems;

Ecocentric approach:
would place most value on biorights;
...and the value of diversity for ecological stability;
but conservation can be costly, with little economic return;
...so can be unpopular with nations seeking economic development;
focuses on localised areas of conservation including whole habitats/ecosystems;
...which can generate community support/involvement;

Award [1] for an explicit statement of their view of which approach is most appropriate, that has some support/justification in their response. Many students are placing this concluding statement as a starting/introductory statement - which is also acceptable ***[6 max]***

Expression of ideas: ***[2 max]***

Total: ***[20]***

3. (a) eutrophication is an increase in nutrients in an aquatic ecosystem;
nutrients added from decomposing biomass / natural run-off from surrounding areas (natural cycles);
seasonal temperature inversion/turnover/upwelling currents bringing nutrients to surface (natural cycles);

similarly run-off from agricultural land/artificial fertiliser/fertilisers/slurry adds nutrients to water (human activities);
domestic waste water contains phosphates and nitrates/detergents/non-treated sewage(human activities);
[3 max] *for causes* ***and [2 max]*** *if only natural or human causes are mentioned.*

both human and natural eutrophication leads to increase in biomass of algae initially/rapid algae growth;
the algae increase turbidity/lower the light penetration to underwater plants;
increased death of algae/underwater plants leads to increase in DOM/bacteria;
increased bacteria increase BOD which leads to lowered oxygen content of water/causes hypoxia;
lowered oxygen leads to stagnation/anaerobic bacteria/death of many organisms;

human induced eutrophication happens a lot faster than natural eutrophication/on a bigger scale;

[4 max] *for outline of eutrophication* ***[6 max]***

(b) *For full credit in describing feedback, responses should identify two steps. Step 1:* how change in one factor causes change in another; Step 2: how the second factor effects the first, either increasing its change (positive feedback) or decreasing its change (negative feedback).

positive feedback ***[2 max]****:*
as more nutrients are added to the system, biomass of algae increases due to non-limiting nutrients;
decomposition of increased biomass leads to further nutrient load and so further deviation from equilibrium / positive feedback occurs;

growth of algae block light so causing underwater plants to die and create more nutrients;
more nutrients leads to further growth of algae so further deviation from equilibrium / positive feedback occurs;

increase in BOD/bacteria causes oxygen-dependent/sensitive organisms to die; this increase in DOM leads to even further increase in BOD/bacteria so further deviation from equilibrium / positive feedback occurs;

n*egative feedback* ***[2 max]****:*
increase in nutrients promotes growth of plants/algae that fix/store them in biomass;
this leads to a reduction in nutrients so balance is restored/negative feedback occurs;
increase in algae/phytoplankton will lead to increase in zooplankton/algal feeders;
which may lead to subsequent decrease in algal populations so balance is restored/negative feedback occurs;

increase in dead organic matter provides more food for decomposers which increase in number;
increased rate of decomposition leads to a decrease in dead organic matter so balance is restored / negative feedback occurs;

Allow any other valid examples of feedback that show both steps indicated above. ***[4 max]***

(c) *description of system:*
for example: global warming
global warming is a rise in global temperature due to increased greenhouse gases retaining more heat in atmosphere;
some greenhouse gases come from human activities e.g. CO_2 from burning fossil fuels/methane from cattle/rice farming / deforestation reducing carbon fixation/carbon sinks;
this causes many environmental problems e.g. shifting biomes / raise of ocean level / flooding / climate change / loss of habitats/biodiversity;

*Award **[2 max]** for the description*
explain:
*explanation of positive feedback **[4 max]***
global warming causes melting of permafrost releasing trapped methane gas; which further increases temperature as it is a greenhouse gas i.e. positive feedback;
global warming increases ocean temperatures which reduces coral distribution/abundance;
this reduces their ability to fix carbon leading to more CO_2 and further global warming i.e. positive feedback;
changes in ocean temperatures decrease amount of dissolved CO_2 in water;
leads to further increase in CO_2 in atmosphere (as less dissolves) i.e. positive feedback;

global warming causes increased rates of evaporation / more water vapour;
water vapour is greenhouse gas, so more global warming i.e. positive feedback;

Global warming creates drier areas which are susceptible to fire;
Fires release more CO_2 into the atmosphere, so more global warming;

*suggested solutions **[4 max]***
could reduce burning fossil fuels/use alternatives renewable energy/so reducing the CO_2 in atmosphere;
or increase carbon sinks/forests/artificial sinks to take up and store the CO_2;
change in lifestyle to reduce personal transport/use more public transport/use carbon-neutral technology (biofuels)/reduce electricity use;
further pollution could cause global dimming with increased cloud cover/aerosol particles;
increased evaporation due to warmer air could increase cloud cover and albedo/reflection of sun's energy increases;
mechanisms may take a long time to start to work/geological history shows change is slow to reduce positive feedback on a global scale; ***[8 max]***

Expression of ideas: ***[2 max]***

Total: ***[20]***

4. (a) *Natural processes*: ***[3 max]***
respiration by animals and plants releases carbon dioxide to atmosphere;
carbon dioxide comes out of solution from bodies of water;
erosion/weathering of limestone and other rocks;
volcanic activity;
natural bushfires;
natural methane sources from animals/termites/bacterial decay can be oxidised to CO_2;

Non natural/human processes: ***[2 max]***
human induced burning of fossil fuels releases carbon dioxide;
increase in decomposing materials - landfills/sewage increase CO_2;
industrial processes release CO_2, for example, cement works;
burning land for agriculture/land clearance;
increased agriculture (livestock) increases methane being released to atmosphere;

do not credit burning/fire twice
do not credit deforestation as less CO_2 absorbed/taken up etc - question asks for addition of CO_2 ***[5 max]***

Accept any other reasonable response.

(b) both have increased their carbon footprints over the last 100 years;
increase linked to increase in world population/country populations;
the spread of the internal combustion engine technology worldwide;
the spread of electricity and electric products worldwide;

LEDCs:
generally very little change in carbon footprint over past hundred years with fossil fuels per capita/person;
except possibly in last twenty years some increases as new sources of fossil fuel available/found/manufacturing increased/more electricity consumption/LEDC industrialisation;
As LEDC population increases/rapid population increase so does carbon footprint for country but not per person;
diets increasing in meat/higher processed foods means footprint increasing;

MEDCs:
sudden increases in fossil fuels and so carbon footprints electricity became widely available;
steady increase over past 50+ years as technology and energy usage increases as costs are low;
per person/capita carbon footprint very high;
consumer society encourages more goods/services so increasing carbon footprint;
public pressure for green goods/services is making companies reduce carbon footprints/become carbon neutral;
governments working towards carbon targets are putting into place policies to reduce carbon footprint;
At least one comparison must be made for 5 marks
Accept any other reasonable response.

*Award **[3 max]** if only LEDCs or MEDCs included in the response.* ***[5 max]***

(c) even if humans are causing climate change, Earth will correct itself (Gaia hypothesis);

yes to warming:
observations/scientific data that climate is warming;
observations/scientific data that carbon dioxide/greenhouse gas levels are increasing;
data from a variety of sources and times indicates warming(evaluation);

no to warming:
natural fluctuations occur so this could still be a short-term trend;
only technologically verifiable data from a short period of time collected;
other sources used are not all reliable/fully understood(evaluation);

yes to human caused
human activities /fossil fuel combustion are known to increase carbon dioxide/greenhouse gas levels;
carbon dioxide/greenhouse gas are known to impact global temperatures;
therefore it is likely that human activities are resulting in global climate change (evaluation);
rapid rate of increase in CO_2 implies a human link;

no to human caused
however, climate has changed in the past;
due to natural fluctuations/predicted Milanokovich cycles ;
current carbon dioxide levels/greenhouse gas/global temperatures/fluctuations are moderate compared to geologic history;
therefore it is not conclusive that humans are causing global climate change(evaluation); ***[8 max]***

Award ***[6 max]*** *if no* clear conclusion regarding relative *strengths or contrasting viewpoints.*

Expression of ideas: ***[2 max]***

Total: ***[20]***

5. (a) *for example*, Whales as a resource*;*
how value changed
valuable resource prior to 1920/extensively harvested;
lost value as petroleum products/fossil fuel oil/plastics became cheap and available;

influence of culture:
different regions of the world value them differently e.g. Inuit value them spiritually and as food/oil resource;
nowadays, generally valued for their biodiversity;
now valued from ethical and moral/aesthetic point of view;
some countries /Japan/Norway still hunt whales for scientific purposes;

influence of economics:
in past valued economically as food/oil resource;
now valued economically for tourism;

influence of technology:
pre fossil fuels, technology allowed for oil to be extracted from whales;
now technology in place to exploit fossil fuels, so whales less significant for this purpose;
change in fishing/harvesting technology allowed populations to plummet;

for example. uranium as a resource*;*
how value changed
prior to splitting of the atom no known use/value;
increased in value during 20th century as value of nuclear energy became understood;

influence of culture:
there was a shift in values from acceptance to reluctance as the dangers became clearer;
ethical values regarding uranium have shifted over time depending on historical events e.g. nuclear bombs/tsunami impacts in Japan;
awareness of role of fossil fuels in global warming may have shifted interest in favour of nuclear energy for some societies/countries;

influence of economics:
industrialisation/economic development led to increased significance/value of centralised energy supply;
initially seen as a clean, cheap source of energy;

influence of technology:
as nuclear technology has been developed, uranium value has increased;
as technology for producing nuclear energy/nuclear fission/nuclear bomb has developed so value has increased;
shifts in technology to find reserves therefore shifting the value of regions where resource is found;

*Award **[1 max]** for named resource; **[2 max]** for how its value changes historically or geographically; and **[4 max]** for explanation of influences on its value. Award **[4 max]** if only one influence is addressed.* ***[6 max]***

Award credit for description of specific examples/case studies.

(b) *Range:*
e.g. renewability:
renewable energy resources are replenished within a similar time-scale to that at which they are extracted;
resources may be renewable through chemical fixation of solar energy / through direct use of solar heat/light / quite independently of solar energy;
non-renewable energy resources cannot be replenished within a similar timescale to that at which they are extracted;
replenishable energy resources may be dependent on solar energy for replenishment but do not involve its chemical fixation (eg hydropower, 'solar' power, wind power, geothermal, tidal etc);

N.B. *This last category of 'replenishable' is often included within 'renewable' energy resources in the literature, so do not penalise responses that do the same.*

e.g. cost:
costs of energy resource may come from extraction, production, transport, storage, utilisation;
some have high set-up cost but low production cost, and vice versa;
there is economy of scale where cost can be reduced through centralisation;
cost can vary considerably dependent on time and location;

Examples:
Award ***[1 max]*** *for each named example with some comment identifying its position within the chosen range. Appropriate comments may vary considerably but should be of equal validity, relevance and significance to those shown below:*

biofuel/charcoal/fuelwood/biogas - is renewable replenished through solar energy/photosynthesis/has relatively low extraction/production costs/most readily available to rural ELDC communities;

hydroelectric energy - is renewable/replenishable dependent on solar energy / has high set- up but low maintenance cost / cost effectiveness highly dependent on location;

solar energy - is renewable/replenishable utilising light or heat of the sun / most direct renewable use of solar energy / high set-up costs but low maintenance / cost-effectiveness quite dependent on latitude/climate;
wind energy - is renewable/replenishable dependent on solar energy/extraction has no impact on its replenishment/relatively low cost but inconsistent production/adaptable for small or large scale production;
tidal energy - is renewable/replenishable but not dependent on solar energy/dependent on planetary rotation/gravity / fairly high installation cost but relatively low maintenance / limited to coastal location with sufficient tidal range;

geothermal energy is renewable/replenishable but not dependent on solar energy/replenished by heat from earth's core / can be relatively cheap but very dependent on location / recently become cost effective through technological development;
requires an underground/close to the surface heat source;

fossil fuels are non-renewable since their formation takes vast amounts of time compared to rates of extraction / although large reserves do still exist, stocks are depleting / cost will vary considerably dependent on a regions available reserves / cost of extraction very variable dependent on sources;
Other examples of energy sources with appropriate comments may be credited.

For full credit, a response should identify the RANGE over which energy sources are being considered and then identify the position within this range for a number of examples. The most obvious range might be their renewability, but responses that compare/identify sources over a range of relative cost/efficiency/availability/current consumption/current production etc should equally be credited.

Award 2 max for outlining the range, and 4 max for naming and correctly identifying the position of different energy resources within this range. ***[6 max]***

(c) definition of sustainable development *i.e*. meeting current needs without compromising ability of future generations to meet their own needs / *OWTTE*;

some energy resources are not sustainable e.g. uranium/fossil fuels;
increased efficiency/conservation of energy may increase sustainability of development;
but consumption of non-renewable resources/fossil fuels is never sustainable;
nuclear fuels will be available for 1000s of years as only small quantities are used;
some people may argue that this is sustainable;
energy resources which are renewable/replenishable can be considered sustainable;
some are directly dependent on solar energy e.g. solar power / planetary motion e.g tidal power / heat from earth's core e.g. geothermal;
...these sources are, and will be, constant and sustainable for very long periods of time;
others are dependent on living processes/photosynthesis/chemical fixation of solar energy e.g. biomass/biofuels/biogas;
...and these are sustainable only if they are harvested within the rates of replenishment;
however, although the source of energy may be renewable/sustainable, the technology/extraction/ production processes involved may not be sustainable;

as long human populations continue to grow/seek improved living standards;
demand for energy will increase and sustainability will be more unlikely;
some would argue that technological development will, however, allow for sustainable energy supply even as demands increase; ***[6 max]***

Expression of ideas: ***[2 max]***

Total: ***[20]***