MARK SCHEME for the October/November 2011 question paper

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for the guidance of teachers

0460 GEOGRAPHY

0460/12

Paper 1, maximum raw mark 75

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



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The features of the marking scheme

Each question carries 25 marks. Candidates cannot earn above the maximum marks available within each sub section.

The marking scheme attempts to give guidance about the requirements of each answer and lists a number of responses, which will earn marks along with the general principles to be applied when marking each question.

It should be noted that candidates can earn marks if their answers are phrased differently provided they convey the same meaning as those in the mark scheme. THE CANDIDATES DO NOT NEED TO USE THE SAME WORDING TO EARN MARKS.

The notation 'etc.' at the end of an answer in the mark scheme signifies that there may well be other correct responses or examples that can be given credit. Providing the statement is true, relevant to the question asked and not repetition of a previous point made credit should be given.

A point made within one sub-section which is an answer to the question set in a different sub-section should not be given credit as each sub-section asks different questions which require independent answers.

The mark scheme uses semi colons (;) to separate marks and diagonals to separate alternative answers.

Levels of response marking is used for section (c) of each question.

Thus it is the quality of the response that determines which level an answer achieves rather than the quantity of statements contained within it. However, once assigned to a level the mark achieved within that level is determined by the number of points made.

Levels 1 and 2 are distinguished by whether statements are simple (level 1) or developed/elaborated (level 2). A candidate can immediately enter L2 by making developed points without making any L1 statements. In order to achieve L3 a candidate must have already reached the top end of L2 – in addition his/her answer should have a clear example and the answer is place specific as well (7 marks).

Where statements are assigned levels by the examiner this should be indicated by the use of L1 and L2 next to the statements. Ticks should **not** be used on answers that are marked using levels of response marking.

Summary:

Level 1 (1 to 3 marks): 1 simple statement (1 mark) 2 simple statements (2 marks) 3 simple statements (3 marks)

Level 2 (4 to 6 marks): 1 developed statement (4 marks) 2 developed statements (5 marks) 3 or more developed statements with e.g. (6 marks)

No example/inappropriate example = MAX 5 marks

Level 3 (7 marks) 3 or more developed statements + named example with at least one piece of place specific detail.

	Page 3		Mark Scheme: Teachers' version	Syllabus	Paper	
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1	(a) (i	i) St	age 1			
		1	nark		[1]	
	(ii	re re	gh birth rate/birth rate remained unchanged/slightly ducing/decreasing/low death rate/rapidly decreasing th rate is much higher than death rate = 2 th rate is higher than death rate = 1	-	e;	
		2	@ 1 mark		[2]	
	 (iii) Ideas such as: Small family size; Availability/people can afford contraception/birth control/family planning; Knowledge of/education about contraception/birth control/family planning; Emancipation of women; Women are more career minded/prefer to work; Knowledge of/education about problems caused by large families/population growth; Government policy (or example); Low infant mortality rate; Expensive to raise children/desire for material possessions; Later marriage; Access to abortion; Less need for children to work; pensions etc. 					
		3	@ 1 mark		[3]	
	(iv	e. T\ e. O	ne mark for correct choice of country linked with star g. UK Stage 4 yo marks for generic reference to birth and death ra g. UK has low birth rates and low death rates = 2 ne further mark for a reasonably accurate reference g. UK BR c.10 per 1000/DR c.10 per 1000	tes	e statistics	

4 @ 1 mark

[4]

Page 4		Mark Scheme: Teachers' version	Syllabus	Paper
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	Zimt Ugai Ugai Ugai	erences or similarities, which could be statistics or in babwe's life expectancy generally higher; nda's life expectancy higher in 2005; nda's starts to fall in 1985 but Zimbabwe's starts to nda's rises again from 1995, Zimbabwe's keeps fal babwe in 1955 was 42, Uganda 40.	fall in 1990;	as:
	3@	1 mark		[3
	bette inoci impr train inves pens bette good bette decr Reas (Civi Fam AIDS Drou	sons for increase in life expectancy such as: er treatment of diseases/or examples/drugs/medicir ulation against diseases/vaccines; oved health care facilities/or examples/hospitals/cli ing/availability of doctors/nurses; stment in care homes/services for elderly; sions; er water; d sanitation; er food supply/diet; easing crime rates/better security etc. sons for decrease in life expectancy such as: l) war/conflict/increasing crime rates; ine/not enough food; S/sexually transmitted diseases/epidemics; ught; nomic failure etc.		

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing policies to reduce natural population growth rates.

(e.g. more contraceptives, government incentives to reduce: family size, one child policy etc.)

Level 2 (4–6 marks)

Uses named example (e.g. China).

More developed statements describing policies to reduce natural population growth rates.

(e.g. government issues free contraceptives, couples are fined if they have more than one child, free education for first child etc.)

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. China).

Comprehensive and accurate statements describing policies to reduce natural population growth rates, including some place specific reference.

(e.g. government issues free contraceptives, one child policy, granny police keep an eye on couples and report people who have more than one child to the authorities, free education for first child etc.)

Page 5			Mark Scheme: Teachers' version	Syllabus	Paper
			IGCSE – October/November 2011	0460	12
(a)	(i)	Offic	es/shops/apartments		
		1 ma	ark		[1]
	(ii)	Wate Elec Sani Heat Secu Cool Air c	er supplies; tricity/gas; itation/drainage; ting; urity; king facilities; conditioning etc.		[2]
		2 @	I Mark		[2]
(iii)	on ru near on s on m near near near near near	ural-urban fringe/outskirts/edge of city; centre of city/CBD; teep valley sides/hillsides/steep slopes; harshland/land liable to flood/near rivers; industry/factories; low cost housing; main roads; railways; waste tips;		
		3@	1 mark		[3]
(iv)	man peop canr as th not e rates	y people migrate from countryside; ble are unable to obtain jobs/work for low pay/work i not afford housing/it is a cheap area to live; hey can build them themselves/cheap to build; enough houses/inadequate government investment s of natural increase are high;		
		4@	1 mark		[4]
	(a) (Page 5 (a) (i) (ii) (iii)	 (i) Officient 1 ma (ii) Ame Wate Election Sanit Heat Section Cool Air of 2 @ (iii) Location 1 Cool Air of 2 @ (iii) Location 1 Cool Air of Cool Air of 2 @ (iii) Location 1 Cool Air of Cool Air of Cool Air of Cool Air	IGCSE – October/November 2011 (a) (i) Offices/shops/apartments 1 mark 1 mark (ii) Amenities such as: Water supplies; Electricity/gas; Sanitation/drainage; Heating; Security; Cooking facilities; Air conditioning etc. 2 @ 1 mark (iii) Locations such as: on rural-urban fringe/outskirts/edge of city; near centre of city/CBD; on steep valley sides/hillsides/steep slopes; on marshland/land liable to flood/near rivers; near industry/factories; near main roads; near waste tips; on derelict land etc. 3 @ 1 mark (iv) Ideas such as: many people migrate from countryside; people are unable to obtain jobs/work for low pay/work if cannot afford housing/it is a cheap area to live;	IGCSE - October/November 2011 0460 (a) (i) Offices/shops/apartments 1 mark (ii) Amenities such as: Water supplies; Electricity/gas; Sanitation/drainage; Heating; Security; Cooking facilities; Air conditioning etc. 2 @ 1 mark (iii) Locations such as: (iii) Locations such as: on rural-urban fringe/outskirts/edge of city; near centre of city/CBD; on steep valley sides/hillsides/steep slopes; on marshland/land liable to flood/near rivers; near industry/factories; near main roads; near main roads; near railways; near waste tips; on derelict land etc. 3 @ 1 mark (iv) Ideas such as: many people migrate from countryside; people are unable to obtain jobs/work for low pay/work in informal sector; cannot afford housing/it is a cheap area to live; as they can build them themselves/cheap to build; not enough houses/inadequate government investment in housing; rates of natural increase are high; easy access to/close to work etc.

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- (b) (i) Problems such as: Traffic congestion; Atmospheric pollution; Noise pollution; Water pollution; Not enough housing/high cost of housing; Small/tightly packed/overcrowded houses; Lack of open space/green spaces; High unemployment; Pressure on hospitals/education services; High crime rates; Visual pollution/visually unattractive; waste disposal/litter etc.
 3 @ 1 mark
 (ii) Ideas as appropriate to chosen problem:
 - e.g. Traffic congestion: Pedestrianise areas; Set up urban tramway; So less people will use cars (dev); Build metro system; Build outer urban ring road; So through traffic will not enter urban area (dev); Install traffic lights/build roundabouts; Congestion charging; Increase cost of road duties/parking; Provide more buses; Decentralise services/workplaces; Create off street parking; Employ more traffic police; Widen roads; Only allow use of cars on certain days of week; Allow only 1 car per family; Car sharing; Subsidise public transport; Park and Ride; Staggered office hours etc.

5 @ 1 mark or development

[5]

[3]

Page 7	Mark Scheme: Teachers' version	Syllabus	Paper
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(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing a change in shopping facilities in a town or city and/or advantages and/or disadvantages of the change.

(e.g. building new shopping centre, loss of farmland, easy to go shopping by car, competes with businesses in centre, people can shop under cover, people have more choice of shops etc.)

Level 2 (4–6 marks)

Uses named example.

More developed statements about advantages and/or disadvantages of the change, along with some description of the change in land use.

(e.g. building new out of town shopping centre; traffic congestion as many people who use new shopping centre travel by car, loss of farmland due to new shopping centre/road construction, atmospheric pollution from increased traffic, easy to go shopping by car as out of town centre has free car parking etc.)

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. Warsaw).

More developed statements about advantages and disadvantages of the change, including some place specific reference, along with some description of the change in land use.

(e.g. building Arkadia shopping mall covering a total area of 287 000 m² the biggest shopping mall in Central Europe, traffic congestion as many people who use new shopping centre travel by car as there are 4000 free parking spaces, easy to go shopping as Arkadia is served by 15 bus routes and 10 tram lines, offers people greater shopping choice including Lacoste, Gant, Peek & Cloppenburg and Tommy Hilfiger, as well as high street chains like Zara, Espirit and Kappahl etc.)

	Page 8			Mark Scheme: Teachers' version	Syllabus	Paper
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3	(a) ((i)	С			
			1 ma	ark		[1]
	(i	ii)		radient steeper in C than B; eeper in D than B.		
			2@	1 mark		[2]
	(ii	ii)	Low It is Spee Ther It flo It is The	st deposition will occur in B or D as): gradient (B or D); unable to transport its load (B or D); ed of flow is reduced/lack of energy (B or D); re are loose rocks/pebbles (B or D); ods often (B or D); shallow (B); river is in its lower course (D); r bend of meander (D);		
			3@	1 mark		[3]
	(iv	v)	(salt (sus	tion) materials being pushed/rolled along river bed; ation) materials being picked up by water and bound pension) materials carried/suspended within the wa ution) materials dissolved in the water;	-	l/series of hops;
			4@	1 mark		[4]
	(b) ((i)	Shaj Rive	mark for: pe of section showing depth; r cliff labelled; off slope labelled etc.		
			3@	1 mark		[3]
	(1	ii)	Eros Due Depe Narr Ever Durit Ends	s such as: sion on outer banks of meander; to faster speed of flow (dev); osition in inner bend; ows neck of meander; ntually cuts through/until they meet; ng time of flood (dev); s of former meander sealed by deposition; ner channel/meander becomes oxbow lake etc.		
			5@	1 mark or development		[5]

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(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing advantages and/or difficulties of living on a flood plain.

(e.g. Good for agriculture/fertile soils; Water for irrigation; easy to build road/rail; source of food/fish; flat building land; flooding; instability of foundations; need to bridge rivers; competition for space etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements describing advantages and/or difficulties of living on a flood plain. (e.g. fertile soils therefore high crop yields; Water for irrigation enables cultivation in dry periods; easy to build road on flood plain; source of food/fish to vary diet; flat building land so construction is easy;

flooding may regularly damage homes; need to bridge river makes cost of road construction expensive; competition for space due to high population density etc.)

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. Ganges).

Comprehensive and accurate statements describing advantages and difficulties of living on a flood plain with place specific information.

(e.g. fertile soils therefore high rice yields; Water for irrigation enables cultivation when north east monsoon winds blow overland; easy to build road on flood plain; source of food/fish to vary diet; flat building land so construction is easy; flooding may regularly damage homes;

need to bridge river makes cost of road construction expensive; competition for space due to high population density etc.)

Page 10)	Mark Scheme: Teachers' version	Syllabus	Paper
			IGCSE – October/November 2011	0460	12
4 (a)	(i)		derate) chemical (weathering)		[4]
		1 ma	агк		[1]
	(ii)	500-	o 12 °C; -1700 mm Accept single figures or a range – units needed)		
		2@	1 mark		[2]
(iii)	heat expa cooli cont	s such as: ing of outer layers of rock; ansion of rocks/minerals; ing of rocks/outer layers; raction of rocks/minerals; r layer peels/crumbles away etc.		
		3@	1 mark		[3]
(iv)	(hot/ doub encc as th more	s such as: wet conditions) encourage chemical weathering; bles with every rise of 10 °C; burages more biological weathering; here is far more plant growth/lots of trees; e likelihood of tree roots in cracks; e rapid release of CO_2 from decay of plants etc.		
		4@	1 mark		[4]
(b)		Feat obse ldea rocks rocks stee high scatt scree flat to	s such as: ures should ideally be evident from photogr ervations may be 'by implication'. s such as: bare rock surfaces/rocky; s with joints/cracks; s with layers/bedding planes; p/cliffs; land/mountainous; tered/clumps of vegetation; e/loose rocks; op; ed/irregular rock face etc.	aphic evidence	though some
		3@	1 mark		[3]

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- (ii) Candidates should describe the process of freeze-thaw weathering. Credit written answers or information included as part of labelled diagrams (do not double credit here). Expect ideas such as: freeze thaw weathering; rain collects in cracks/joints; temperature falls; below zero/water freezes expands; stress on cracks/joints; joints opened/rock split apart/bits fall off; temperature increase; release of pressure; more water enters the joints/repetition etc.
 - 5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing impacts of drought or tropical storms. (e.g. people killed, crops destroyed, they have no water to drink, soils ruined, people move away etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements describing impacts of drought or tropical storms.

(e.g. people have to walk long distances to find water; lower crop yields leads to lack of food; death through starvation/malnutrition; farmers unable to leave land fallow therefore soils exhausted; overgrazing of livestock takes place; increased likelihood of soil erosion by wind; loss of vegetation leads to more rapid run off; greater potential for flash floods; people move to cities to find food/water etc.)

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. Eritrea).

Comprehensive and accurate statements of drought or tropical storms, including some place specific reference.

(e.g. Lower crop yields so malnutrition rate reached 19.1 percent in Gash Barka zone; 2.3 million people in Eritrea/almost two-thirds of the population depend on food aid; although 80 percent of the population is rural the country only produced 47 percent of its average harvest; over a million Eritreans are likely to go hungry this year; it is made worse because Eritrea is still recovering from a war with neighbouring Ethiopia;

also the resettlement of Eritrean refugees returning from Sudan is an extra strain on the country's resources etc.)

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5	(a)	(i)	14 1 ma	ark		[1]
		(ii)	Idea Long Clos Afflu Well Histo Varie Safe Well	s such as: g established/more tourist destinations; e to many densely populated/urban areas/lots of ot ence/paid leave; developed transport network/better infrastructure (prical cities/sites/monuments; ety of types of holiday available ty/political stability; advertised; need for VISA etc.		[']
			2@	1 mark		[2]
		(iii)	Mou Bead Area Spec Cora Wild Cave Lake Rive Volc Glac	,		r;

NB Attractions must be of different types (e.g. coastal, mountain) but could be named or the type stated (e.g. stack or Old Harry Rocks)

3 @ 1mark

[3]

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(iv) Ideas such as:

to go round/explore/see buildings/towns/places; to photograph buildings/towns/places; for rides/thrills; religious pilgrimages

and/or built attractions such as: cultural buildings/museums/opera house/theatre; churches/cathedrals/mosques; traditional/historical buildings/places/ruins; castles/forts; palaces; monuments/statues/towers; restaurants/bars/discos/night clubs/casinos; theme parks/fairgrounds/water parks; significant/unique buildings/architecture; luxury hotels/resorts; designer/luxury shopping/shopping malls/complexes etc. dams; sporting venues etc.

Examples not to be credited (e.g. La Scala = 0) however if an example is given it may contain a valid idea (e.g. La Scala **Opera House** = 1).

4 @ 1 mark

(b) (i) Difficulties such as: e.g. lack of airports/small airports:

e.g. lack of airports/small airports: insufficient hotels; water supply infrastructure is poor/lack of rain in Jan/Feb; lack of up to date sanitation system; poor electricity network; large animals are not common; wet season may put off tourists from June – Sept etc. poor road network; poor railway system; no coastline/beaches; people have no experience with tourists/language difficulties/resistance from local people; need for finance/possibility of debt etc.

3 @ 1 mark

[3]

[4]

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(ii) Ideas such as:

Benefits:

People can earn money/jobs are created for local people example (to MAX 2); foreign exchange/boosts economy/brings money into country; multiplier effect; people learn new skills; enabling spending on education/hospitals etc. (to MAX 2); development of infrastructure (water, electricity, transport etc.) (to MAX 2); cultural exchange/learn language; retention of culture/traditions: increased market for local farmers; sales of local craft items; locals can use tourist attractions Disadvantages: increase in local traffic/congestion/atmospheric pollution from traffic: loss of local culture/traditional way of life; impact of behaviour of tourists/drunkenness etc.; tourism may encourage illegal activity e.g. gambling, prostitution; noise from tourists; exploitation/low paid jobs/long hours; seasonal work; shortage of water supplies; litter from tourists; lack of privacy; loss of farmland for building; increase in price of goods/services; loss of money to foreign firms/MNCs; highest paid jobs go to foreigners; displacement of local people; dependency on tourism may be a problem in times of recession etc.

NB MAX 3 on benefits/disadvantages

5 @ 1 mark or development

[5]

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(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing how tourism is damaging the natural environment.

(e.g. vegetation destroyed/plants killed, animals killed, fumes from exhausts/traffic; over use of water, litter from tourists on beaches; waste from hotels, damages ecosystems, loss of habitats etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements which describe how tourism is damaging the natural environment.

(e.g. sand dune vegetation destroyed; ecosystems threatened as food chains disrupted; loss of habitats threatens species; noise from construction/traffic scares animals away; fumes from exhausts/traffic damages roadside vegetation, over use of water supplies lowers water table; litter from tourists on beaches/in sea may kills sea turtles; waste from tourists dumped on landfill sites causes seepage of toxins into water table etc.)

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. Villingili, Maldives).

Comprehensive and accurate statements including some place specific reference.

(e.g. tropical coconut palms destroyed for building of hotels; ecosystems threatened as food chain disrupted, loss of habitats for lizards; ferry every 10 minutes from Male pollutes seas, noise from construction/traffic scares animals away; litter from tourists on beaches/in sea may kills reef fish; waste from tourists incinerated polluting atmosphere, coral reefs destroyed by tourists trampling on them/taking samples home.

	Page 16		Mark Scheme: Teachers' version	Syllabus	Paper
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6	(a) (i) A cause of pollution/origin of the pollution/where pollution comes from/thir pollute the environment				m/things which
		1 ma	ark		[1]
	(ii)		umes from crop spraying/herbicides/insecticide/eminestic dung/slash and burn/burning stubble/smell fr		hinery/methane
		B. fu	imes from exhausts/carbon dioxide emissions from	cars etc.	
		2@	1 mark		[2]
	(iii)	Asth Con (Toc Unp Fish	plems for people such as: ma/breathing difficulties; tamination of drinking water/water borne diseases/c much noise) prevents sleep/concentration etc.; leasant ugly buildings/aesthetically unattractive/spoi are killed so people have less food; rain damages buildings etc.		
		3@	1 mark		[3]
	(b) (i)	Malo dano sma cora	s such as: dives is low land/all below 2 metres above sea level; ger of flooding/rising sea level/it could be submerged Il island communities at risk/all the country/island wi I reefs will be damaged; ist industry will be destroyed etc.	d;	
		3@	1 mark		[3]
	(ii)	there carb redu so le	s such as: e will be less carbon dioxide in the atmosphere/emit on dioxide is a greenhouse gas; icing it will make the blanket of gases thinner; ess heat is trapped; se in temperature will be slowed down/temperature		
		(NB	Accept ideas expressed as inverse)		
		4@	1 mark or development		[4]

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(iii) Ideas such as:

Use of alternative energy supplies; e.g. HEP/wind/solar (MAX 1); So less fossil fuels are used (dev); Using more public transport/use bikes; International agreements; Afforestation/reduce levels of deforestation; As trees use up carbon dioxide (dev); Electric cars/ecofriendly cars; Limits on factory emissions/fines; Awareness/education about damage done or what can be done about reducing levels; conservation of energy/use less electricity (MAX 1 on dev of methods); encourage recycling/less incineration; government incentives/grants towards etc.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing causes and/or effects of water pollution. (e.g. kills fish, sewage disposal, oil spillages, pollutes beaches etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements describing causes and/or effects of water pollution.

(e.g. kills fish as oil clogs up their gills, disposal of untreated sewage from large urban areas, oil spillages from tankers washing out their tanks, pollutes beaches so reduces numbers of tourists etc.

(NB MAX 5 marks if no named example or inappropriate example)

Level 3 (7 marks)

Uses named example (e.g. North Sea).

Comprehensive and accurate statements describing causes and effects of water pollution including some place specific reference.

(e.g. kills fish as oil clogs up their gills, disposal of untreated sewage from large urban areas such as Rotterdam along Dutch coast, oil spillages from tankers in Thames estuary washing out their tanks, pollutes beaches along the Essex coast so reduces numbers of tourists, pollutants washed into North Sea from heavily polluted rivers such as Rhine. etc.)