

## Paper 3 Human Options

### UNIT 1 Production, location and change

**Recommended Prior Knowledge** Some familiarity with common terminology about agriculture and industry would be an advantage. Some of the basic material may have already been covered in AS Unit 1.3 Population-resource relationships. Candidates who have studied Economics, Business Studies, Development Studies, Natural Economy or Geography at IGCSE level may already have a working knowledge of some of the concepts and terminology.

**Context** There may be some cross-linkage with material from the Advanced Physical Geography Options Unit 1 Tropical environments when farming systems are being studied. Food production may have been studied in AS Unit 1.3 Population-resource relationships.

**Outline** The four sub-sections examine the economic basis of societies, focusing on agriculture (part of the primary sector) and manufacturing industry (the secondary sector) with some attention to related tertiary and/or quaternary industry. The basic systems concept is used as a framework, but the emphasis is on real examples. Though theories and conceptual models may be referred to as a starting point, the aim is to use concepts and case studies as the main approaches to learning. Current issues and policies are more important than past locational factors, particularly in view of the trend towards globalisation of markets for both primary and secondary products. Another strand that should be borne in mind is the global nature of the environmental issues raised, as well as more local concerns. Traditional systems are often in conflict with national economic needs, but may be the only sustainable solution in the long term.

**Recent textbook** Burtenshaw D; Economy and Development; 2006 Philip Allan Updates. It focuses on globalisation and manufacturing industry and contains pertinent and relatively up-to-date material.

Content	Objectives	Terminology	Suggested Teaching Activities	Online Resources	Other resources
<p><b>1.1 Agricultural systems and food production</b></p>	<p>Understanding of the concept of an agricultural system</p> <p>Knowledge and understanding of factors affecting agricultural land use and practices</p>	<p><b>Land-use</b>  <b>Arable</b>  <b>Pastoral</b>  <b>Subsistence</b>  <b>Commercial</b>  <b>Land tenure</b>  <b>Irrigation</b>  <b>Export production</b>  <b>Extensive</b>  <b>Intensive</b>  <b>Productivity</b>  <b>Inputs</b>  <b>Outputs</b>  <b>Throughputs</b>  <b>Subsystems</b></p> <p><b>Intensification</b>  <b>Extension of cultivation</b></p>	<p>Introduce the idea of classifying agricultural production systems and the basis for classification.</p> <p>Idea of inputs, outputs and throughputs.</p> <p>A blank systems diagram could be filled in by students as each input, output and process is referred to. This would help to reinforce the links between each.</p> <p>Main factors to be covered are <b>physical</b> (land/relief, soil, climate, hazards), <b>social</b> (e.g. population pressure, cultural practices, inheritance laws, education, health), <b>economic</b> (e.g. motive, money/capital, labour force, distance from market), and <b>political</b> (e.g. government policy, NGO assistance, aid, debt). Think about <b>positive and negative</b> factors. Classification is essential.</p>	<p><b>June 2003 Q. 9(a)</b></p> <p><b>June 2005 Q. 9(a)</b></p> <p><b>June 2007 Fig. 1</b></p> <p><b>Nov 2008 Q. 1(a)</b> output</p> <p><b>June 2004 Q. 9(a)</b>  <b>June 2007 Q. 1</b> labour  <b>June 2005 Q. 10(b)</b>  <b>Nov 2006 Fig. 1</b> useful teaching resource about soil erosion as hazard  <b>June 2006</b> focuses on distance from the market</p>	<p>Nagle &amp; Spencer pp.97-98 is the best introduction.  Cook, Hordern, McGahon &amp; Ritson, Chapter 4, pp.194-204  Carr pp.121-125 covers this in detail.</p> <p>Nagle (Development &amp; Underdevelopment) p.55 has a useful map.  Waugh p.438</p>

	<p>Study of examples of intensive and extensive agricultural production</p> <p>2 case studies</p>	<p><b>Extensive</b></p> <p><b>Intensive</b></p> <p>1. Arable system</p> <p>2. Pastoral system</p>	<p>The basic principles underlying the Von Thünen model may be introduced, but there is no need to learn the model in detail. It is important to link it to intensive and extensive farming systems.</p> <p>It may help candidates if the cases chosen are accessible to them from their own context or home country. Other possible case studies include for 1, intensive wet rice cultivation, and for 2, dairying.</p>		<p>Carr pp.131-136</p> <p>Waugh pp.430-435</p> <p>Various examples and case studies in Waugh pp.438-452</p> <p>Hart et al p.135</p> <p>Prosser p.150</p>
<p><b>1.2 The management of agricultural change</b></p>	<p>Understanding of the nature of agricultural change - intensification of production and extension of cultivation</p>	<p><b>Agricultural change</b></p> <p><b>Innovation</b></p> <p><b>Agricultural development</b></p> <p><b>Agricultural reform</b></p> <p><b>Agricultural extension</b></p> <p><b>Biotechnology</b> (Link to AS Unit 1.3 Population-resource relationships)</p> <p><b>Irrigation</b></p> <p><b>Agribusiness</b></p> <p><b>Diversification</b></p>	<p>Agricultural change may occur as a result of government policy or because of external factors such as population pressure, profit motivation or climate change.</p> <p>Modern technology has introduced controversial methods such as GM crops.</p> <p>Alternatives include organic farming.</p>	<p><a href="http://www.monsanto.com/monsanto/layout/sci_tech/ag_biot_ech/def">http://www.monsanto.com/monsanto/layout/sci_tech/ag_biot_ech/def</a></p> <p><a href="http://www.organic-europe.net/country-reports/poland/default.asp">http://www.organic-europe.net/country-reports/poland/default.asp</a> (different countries)</p>	<p>Nagle (Development and Underdevelopment) pp.58-65</p> <p>Cook et al. pp.211-212</p> <p>Geo Factsheet 75 Sept 1999</p> <p>Climate change and vegetation</p>

	<p>The syllabus requires a case study of <b>one</b> country at <b>two</b> different scales:</p> <p>An understanding of agricultural change at the scale of the <b>holding</b> or <b>producer</b></p> <p>An understanding of agricultural change at the <b>national</b> scale</p>		<p>The choice of case studies ideally should be as local and familiar as possible.</p> <p>In a global economy, farmers are affected by external factors. In MEDCs farmers are exploring alternatives to intensive farming. What is important is to stress the difference between increasing yield per hectare and increasing land area under cultivation. Both strategies are possible, but may not go hand in hand, one or the other may be the preferred option depending on the location.</p> <p>Teaching should focus on the <b>need</b> for change, <b>difficulties</b> in bringing about change, <b>management</b> issues and <b>evaluation</b> of attempted solutions.</p> <p>Possible case studies – agricultural change in South Africa or in Eastern Europe.</p>	<p><b>Nov 2005 Q. 9(b)</b></p> <p><a href="http://www.oxfam.org.uk/coolplanet/milkingit">http://www.oxfam.org.uk/coolplanet/milkingit</a></p> <p>Interactive case study – compares the effects of trade on dairy farmers in 2 different countries</p> <p><a href="http://www.defra.gov.uk/">http://www.defra.gov.uk/</a></p> <p>covers various farming issues</p> <p><a href="http://www.countryside.gov.uk">http://www.countryside.gov.uk</a></p> <p><a href="http://www.leafuk.org">http://www.leafuk.org</a></p>	<p>Hart et al. pp.136-137</p> <p>Hart et al. pp.141</p> <p>Geofile 541 April 2007 The Globalisation of food production</p> <p>Nagle (Development &amp; Underdevelopment) pp.63-65</p> <p>Hart (ed) p.132</p> <p>The Crisis in British Farming (Geo Factsheet 105, January 2001)</p>
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<p><b>1.3 Manufacturing and related service industry</b></p>	<p>Understanding the reasons for industrial location</p>	<p><b>The factors of production (land, labour, capital, markets)</b></p> <p><b>Physical factors</b> e.g. relief, site, raw materials</p> <p><b>Economic factors</b> e.g. labour supply, capital, transport, communications</p> <p><b>Political factors</b> e.g. government policy, instability</p>	<p>The differences in location factors for old “heavy” industries such as steel or shipbuilding compared to modern “light” or “footloose” industries could be a useful starting point. This could be stimulated by two locational diagrams. Simulation exercises can be very useful here. They can be produced imaginatively by the teacher therefore as many variables as desired can be built in. Consider the relative roles of the various factors and link factors to productivity. Both come up in questions.</p>	<p><b>June 2004 Q. 10(a)(iii)</b></p> <p><b>June 2006 Q. 2(a)</b></p>	<p>Nagle &amp; Spencer pp.105-107</p> <p>Cook et al. pp.245- 249 cover location factors well and look at high-tech companies in Cambridge, UK, Nike sports in Asia, and food processing and electronics in the UK. Waugh chapter 19</p>
	<p><b>Optional extension study</b></p> <p>Models and theories of industrial location</p> <p>These are not specified in the syllabus therefore it is possible to omit. The decision can be individual and may depend on available time.</p>		<p>The theories of Weber, Lösch, Smith (spatial margins to profitability) and the Product Life Cycle model could be presented to the students in a comparative form, perhaps with sufficient discussion to ensure that the concepts behind them are understood.</p> <p><b>Note</b> Candidates do not need to be able to draw or recall the content of the models and theories, but questions are sometimes set giving a diagram based on one of the above, asking candidates to interpret it.</p>	<p><b>June 2005 Q. 10(a) Fig. 6</b> useful teaching resource</p>	<p>Cook et al. has the most comprehensive and well-exemplified coverage of industrial location and changes, with many case studies pp.242-257</p> <p>Nagle &amp; Spencer p.113</p> <p>Guinness &amp; Nagle pp.140-141</p>

	<p>To study the processes leading to industrial change, growth and development: agglomeration and linkages</p>	<p><b>Agglomeration</b></p> <p><b>Functional linkages:</b></p> <p><b>Horizontal linkage</b></p> <p><b>Vertical linkage</b></p> <p><b>Forwards linkage</b></p> <p><b>Backwards linkage</b></p> <p><b>Industrial inertia</b></p> <p><b>Economies of scale</b></p> <p><b>Diseconomies of scale</b></p> <p><b>Globalisation</b></p> <p><b>Global shift</b></p> <p><b>Foreign direct investment (FDI)</b></p>	<p>The emphasis needs to be on</p> <ul style="list-style-type: none"> <li>• Character</li> <li>• Location</li> <li>• Organisation</li> <li>• Productivity</li> </ul> <p>The location factors have changed over time due to factors which include new technology and competition.</p> <p>Case studies of industrial change could be introduced, such as global shift in the steel industry.</p> <p>Looking at past questions does indicate areas of the syllabus that need attention to detail.</p> <p>Case study 1: Industry in Maharashtra, India</p> <p>Case study 2: Industrial development in South Korea</p> <p>Case study 3: High-tech industry in the UK</p> <p>Case study 4: The US manufacturing belt</p> <p>Case study 5: The rise of the Pacific Rim</p>	<p><b>June 2005</b> <b>Q.10(b)</b> agglomeration</p> <p><b>June 2007</b> <b>Q. 2(a)</b></p> <p><b>Nov 2005</b> <b>Q. 10(a)</b> economies of scale</p>	<p>One of the best sources for this is Nagle (Development &amp; Underdevelopment) pp. 75-77, where the models are clearly and simply explained.</p> <p>Burtenshaw Part 3 pp.13-22 Case studies of MEDCs and LEDCs pp.27-49 Good on shift of manufacturing industry.</p> <p>Geo Factsheet 172 The Challenge of globalisation Geo Factsheet 198 Global trends in FDI Geo Factsheet 161 The Global shift Guinness &amp; Nagle pp.128-132 also deals with location factors and with models, pp.133 -139</p> <p>Nagle (Development &amp; Underdevelopment ) pp.78-82</p> <p>Nagle (Development &amp; Underdevelopment) pp.83-84</p> <p>Prosser (Human Systems) pp.99-103</p>
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	<p>To understand the character, and reasons for the development, of industrial estates and export processing zones (EPZs)</p>	<p><b>Industrial estate</b> <b>Export processing zone (EPZ)</b></p>	<p>Cover advantages and disadvantages of EPZs and industrial estates in detail.</p> <p>Case studies need to be compared and consolidated. Students should look for similarities of approach in the successful countries. Examples could be mentioned from Mauritius, China, Mexico and much of SE Asia.</p>	<p><b>June 2004</b> <b>Q. 10(b)</b> industrial estates <b>June 2006</b> <b>Q. 2(b)</b></p> <p><b>Nov 2008</b> <b>Q. 2(a)</b></p>	<p>Guinness and Nagle p.150</p> <p>Geo Factsheet 94 April 2000 Research &amp; Development Parks</p>
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	<p>To learn about the importance of the informal sector (manufacturing and services)</p>	<p><b>Informal sector</b> <b>Manufacturing industry</b> <b>Service industry</b></p>	<p>In the economies of many LEDCs, a large informal sector exists.</p> <p>The informal sector is often associated with those who migrate from rural areas to urban areas who live in informal housing. Unable to find work in the formal sector, they find, or create, work in the informal sector.</p> <p>Definition of the informal sector.</p> <ul style="list-style-type: none"> <li>• Characteristics</li> <li>• Materials used</li> <li>• Profile of the labour force</li> <li>• Location(s)</li> <li>• Lack of regulation</li> </ul> <p>Consider how the informal sector may or may not be a springboard for industrial development or future employment. Dynamism of the sector.</p>	<p><b>Nov 2006</b> <b>Q. 2</b></p>	<p>Guinness &amp; Nagle p.150</p> <p>Guinness &amp; Nagle pp.162-168</p> <p>The key text is Waugh pp.523-525. It has two excellent short case studies of the informal sector.</p> <p>The classic example is Jua Kali in Nairobi, Kenya, documented in Waugh.</p> <p>Local examples may also be available and should be used where possible.</p>
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<p><b>1.4 The management of industrial change</b></p>	<p>To understand the basis of industrial policy in <b>one</b> country</p> <p>To evaluate the success of the policy</p> <p><b>Note</b> This evaluation is a crucial aspect of the case study as it tests candidates' higher order skills. In marking the parts <b>(b)</b> of questions, Levels 1-3 are differentiated on the basis of the quality of the assessment offered (see Mark Schemes online or on CD).</p>	<p><b>Industrialisation Deindustrialisation Reindustrialisation Regional disparities Development zones Enterprise zones Business parks Science Parks</b></p>	<p>Governments try to control and develop their resources by planning industrial development.</p> <p>It is useful to study policy priorities (type of industry, location), changes in policy over time and difficulties or issues in industrial change in the chosen country.</p> <p>Case study 1: the industrial and economic development of Singapore</p> <p>Case study 2: Spatial changes in China's industrial structure</p> <p>Case study 3: Industry in the North East of England</p>	<p><b>June 2007 Q. 2(a)  Nov 2005 Q. 10(b)</b></p>	<p>Hill (Advanced Geography Case Studies) pp.106-115</p> <p>Geography (The Geographical Association) April 2004 pp.127-139 Waugh pp.528-530</p> <p>Bowen &amp; Pallister pp.260-261</p> <p>Nagle (Development &amp; Underdevelopment) pp.87-89</p> <p>Geo Factsheet 154 Structural Change in the Ruhr (Germany)</p>
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