



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2014

**GEOGRAPHY P1
ANNEXURE**



This annexure consists of 11 pages.

FIGURE 1.3: EARTH'S REVOLUTION AROUND THE SUN

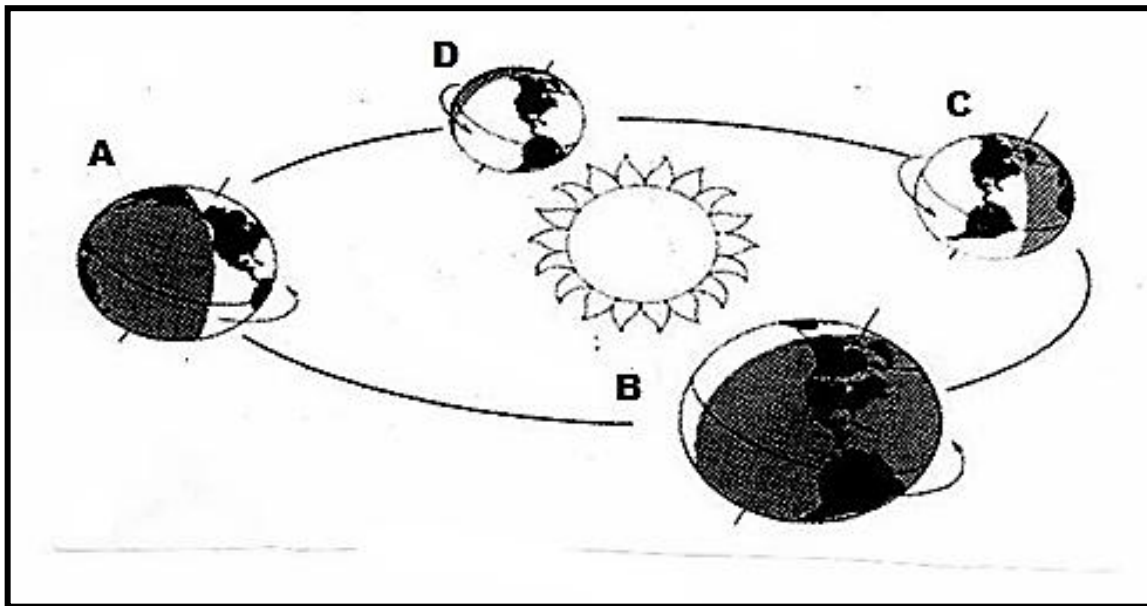


FIGURE 1.4

The Sahel Desert

In the Sahel Desert, desertification is becoming a huge problem. Around the 1950's people settled into the Sahel region, in areas where there was water. This resulted in overgrazing, which is one of the greatest causes of desertification. Eventually, the perennial shrubs were destroyed because of grazing, and they were replaced by annuals. Then the annuals were grazed out which left bare soil. A lot of the topsoil was washed away, and all that was left were rocks. Silt turned hard when it was hit by rain. Therefore, plants were not able to grow because their roots could not penetrate this hard layer. Now this region has turned to desert and it continues to expand. Records show that rainfall in the Sahel has decreased and sands have shifted about sixty miles south into the area. Sahel is expanding due to lack of vegetation in the area. Another reason desertification is happening in the Sahel region is because people are using the slashing and burning method to clear land. This degrades the quality of soil just like overgrazing.

[Source: (No name). *Desertification – a Threat to the Sahel*. (2000)]

FIGURE 1.5: TOPOGRAPHY ASSOCIATED WITH HORIZONTAL LAYERED ROCKS

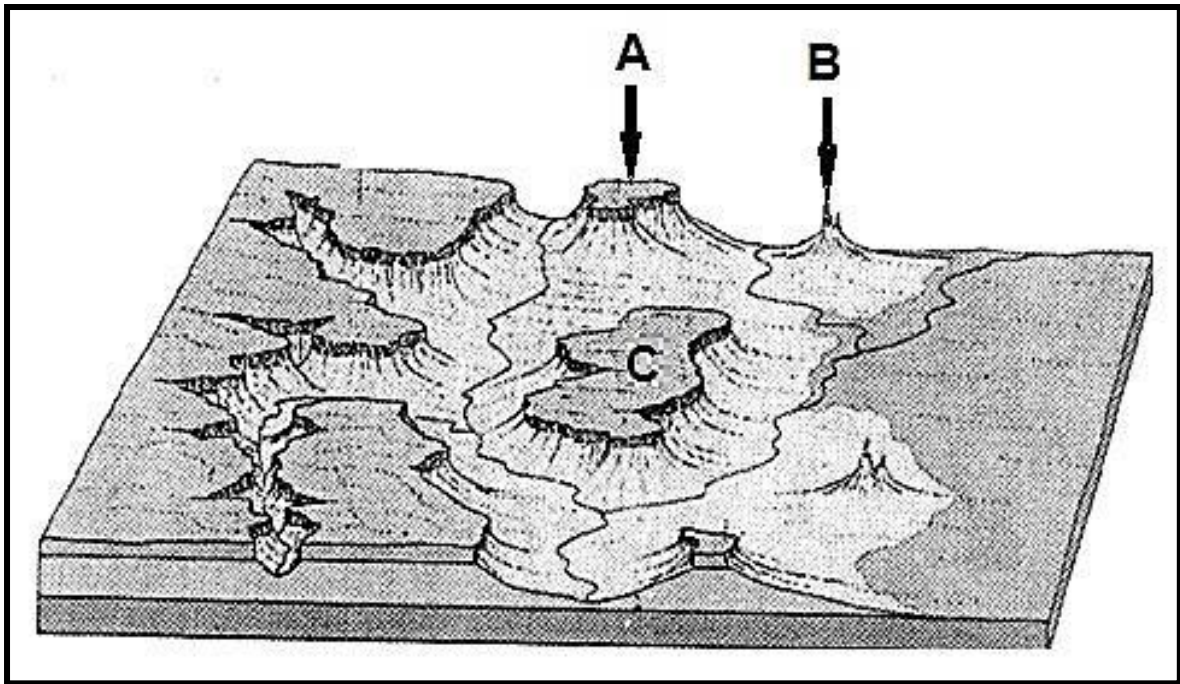


FIGURE 1.6

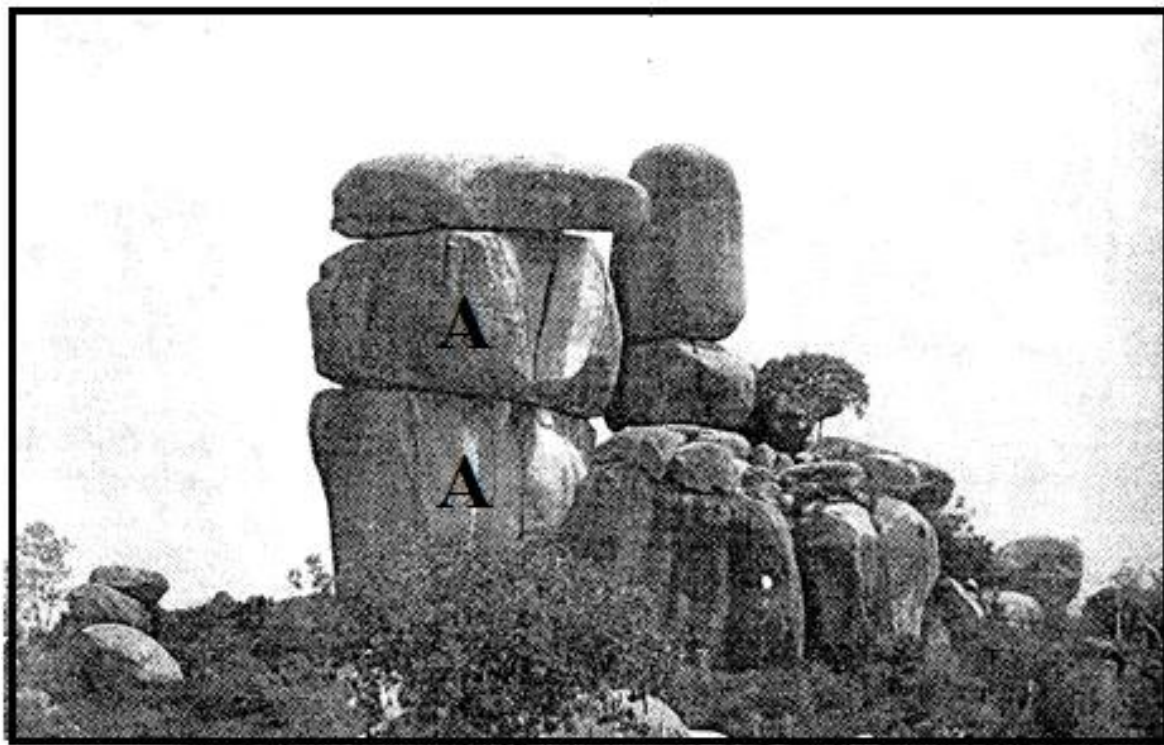


FIGURE 2.1: SYNOPTIC WEATHER MAP

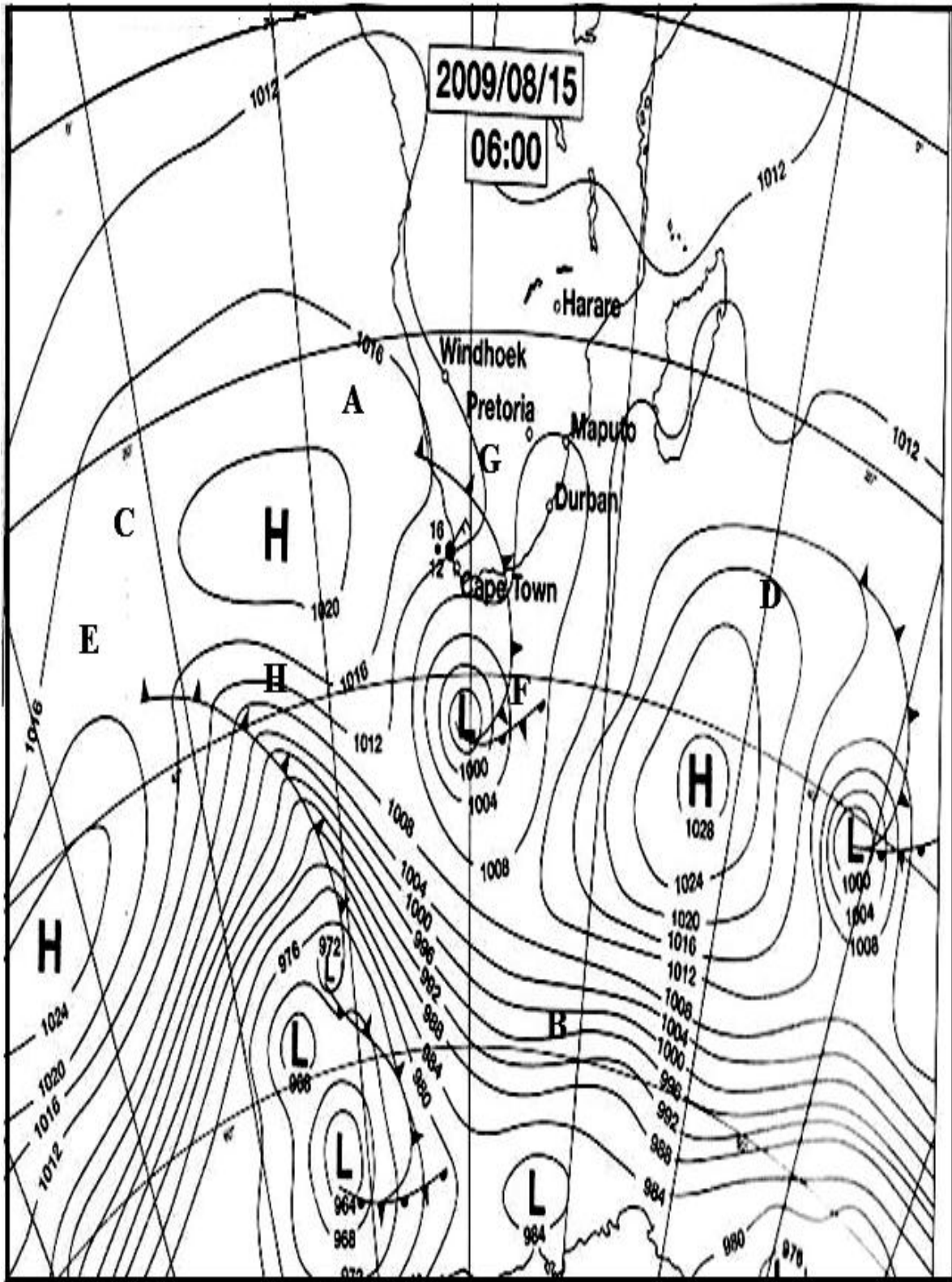


FIGURE 2.3**El Nino and La Nina: The boy child and his little sister**

In Spanish, El Nino means 'The Christ child'. This is the name Peruvian fishermen gave to a warm current that sometimes arrived off the South American coast around Christmas time. The warm current was a tell-tale sign that fishing would be bad that season, because El Nino blocks the upwelling of nutrient rich water.

El Nino is responsible for drought in some parts of the world. Since 1525, there have been 113 El Nino's recorded. This is an average of about one El Nino in every four years. The catastrophic El Nino's are spaced roughly 15 years apart.

FIGURE 2.4: FORMATION OF A FÖHN WIND

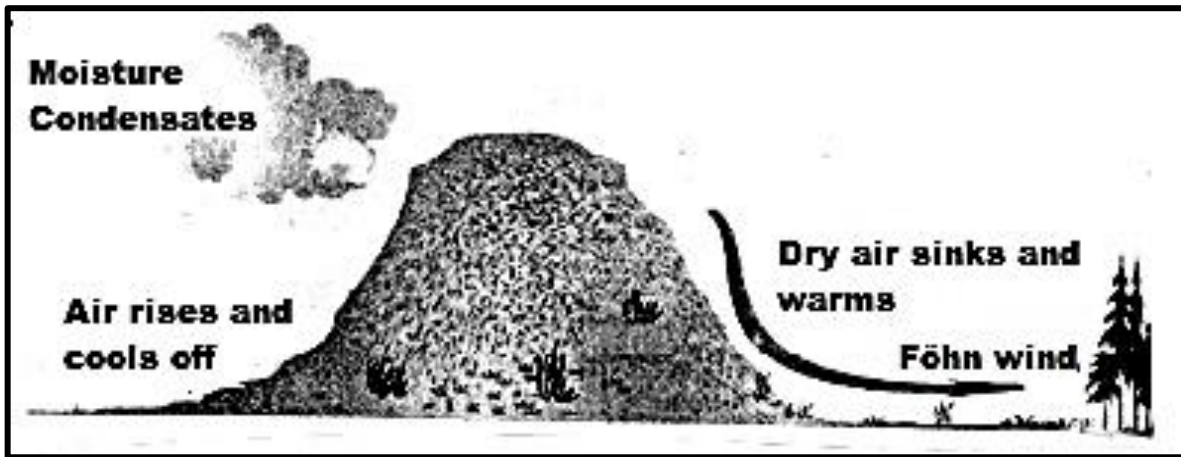


FIGURE 2.5: CUESTA

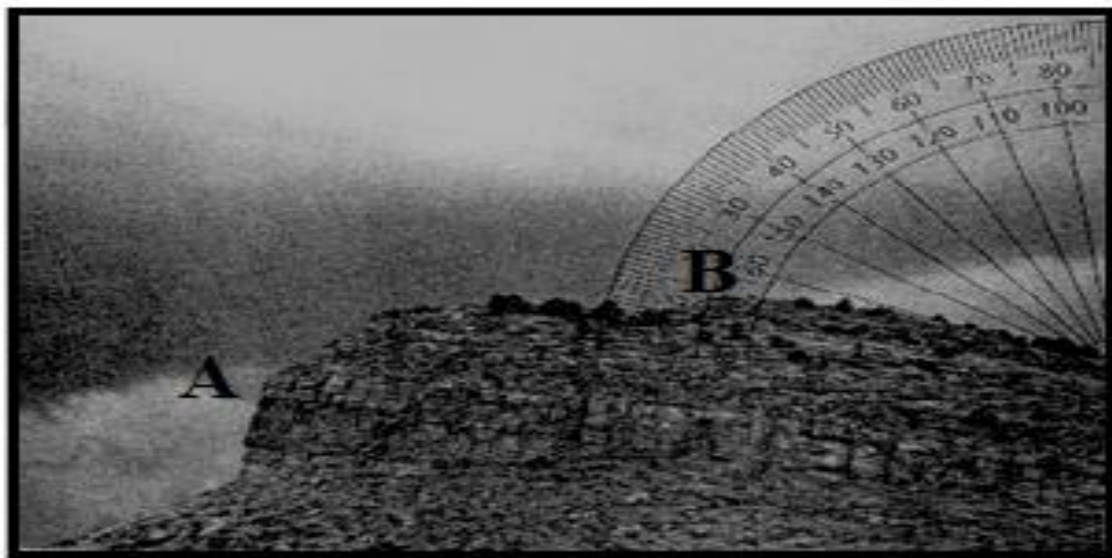


FIGURE 2.6: MASS MOVEMENT



FIGURE 3.3: GROSS NATIONAL PRODUCT

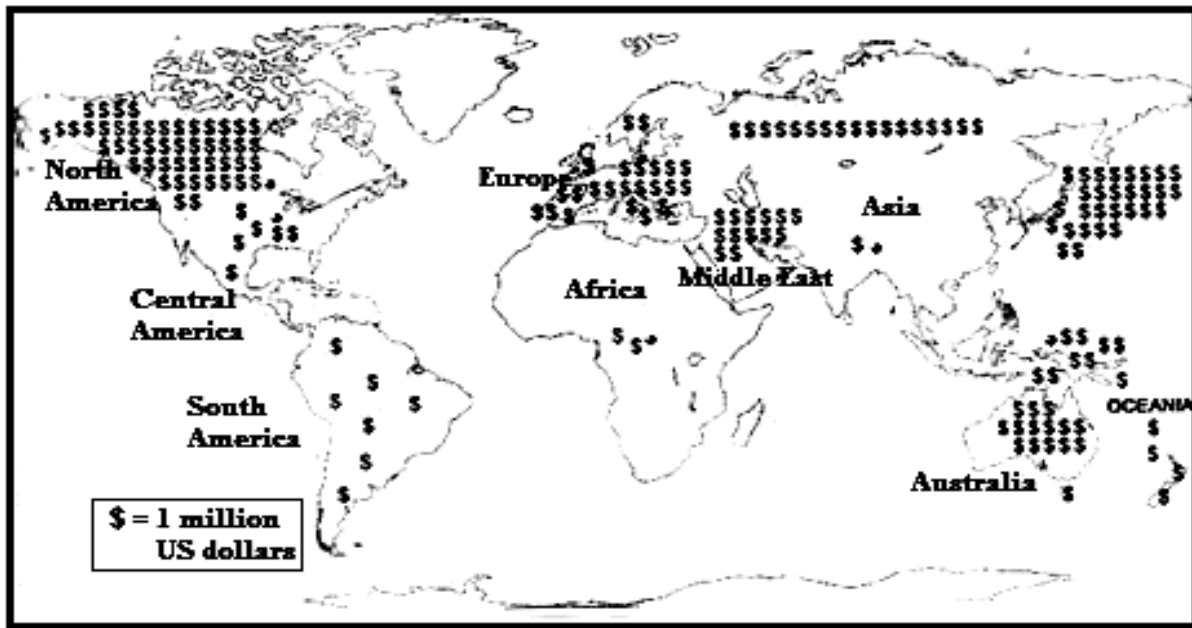


FIGURE 3.4: MODEL OF DEVELOPMENT

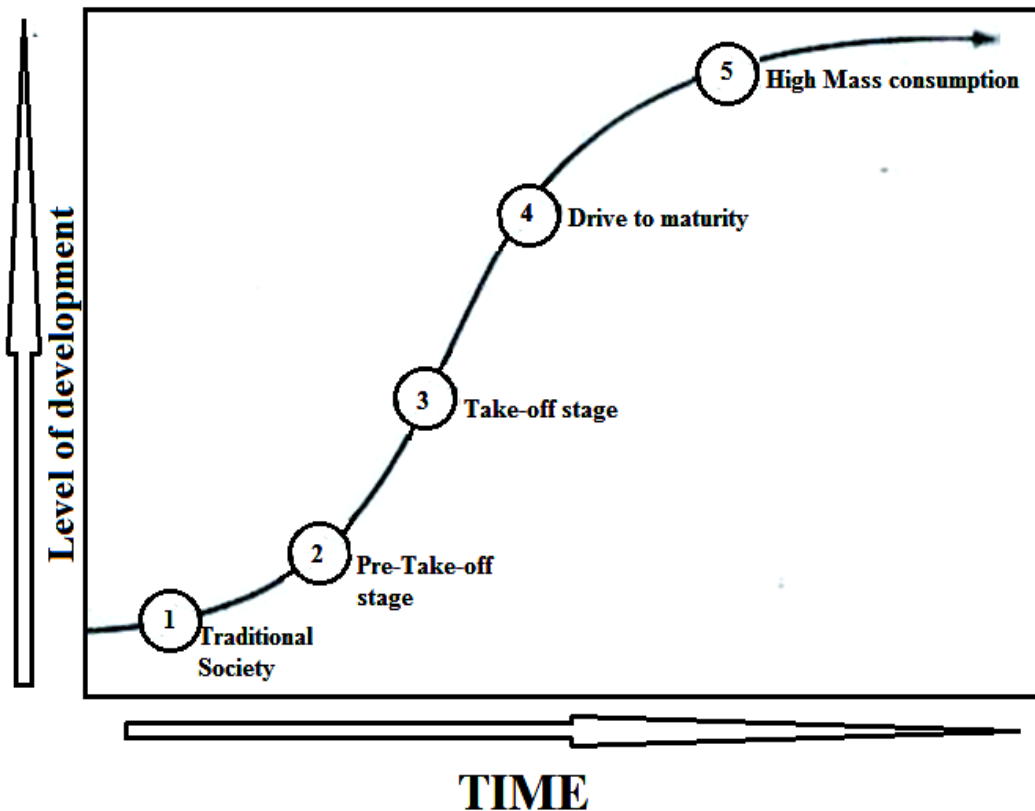


FIGURE 3.5: ACID RAIN



FIGURE 3.6: NEWSPAPER ARTICLE

Van Stadens wind turbines set for Eskom grid hook-up

SA to enter clean energy era

Clean green electricity will become a reality later this week when South Africa's first utility-scale, privately owned wind farm connects to the electricity grid.

All eyes will be on the nine Metro's and turbines at Van Stadens near Port Elizabeth as the developers test the R500 million state-of-the-art renewable energy equipment in the build-up to the official 27MW facility to the Eskom grid in just over two months' time.

Afri-Coast Engineers director Donald McGillivray – who has spent 10 years pioneering renewable wind energy in South Africa – said after a year of construction on the outskirts of Blue Horizon Bay, they were now counting the days until they started supplying much needed power to the Nelson Mandela Metro from February next year. "It is exciting to see everything coming together so quickly," he said.

McGillivray said the hot commissioning of the project – which will start one turbine at a time was critical to ensuring the success of the project.

Erected using the biggest crane on the African continent, the Van Stadens project has, however, not all been a breeze for the developers after a handful of local residents complained about the towering wind turbines on a hill above the seaside village.

The objections from a few wealthy landowners have come despite the development obtaining all environmental approvals and permits required and guaranteeing impoverished local township residents a substantial portion of the project equity and revenue over the next 20 years.

Several costly legal challenges have fallen flat. "The fourth-generation wind turbines are quieter than older wind turbines and all wind farms have to comply with strict environmental authorization requirements, which include noise emissions," said McGillivray. "The wind farms will improve both the quality and reliability of the electricity supply to Blue Horizon Bay and surrounding areas.

[Source: David MacGregor (Senior Reporter – *Daily Dispatch*)]

FIGURE 4.3: CASE STUDY – AGRINAS

AGRINAS is a community-based organization that works principally in rural farming communities in China, Bosnia, Morocco, Kazakhstan, Indonesia and Albania. AGRINAS is an acronym for Agricultural International Assistance. Its purpose is to assist at community level, with better agricultural practice that is appropriate and sustainable. In this way, communities can create surpluses and break out of their cycle of poverty, by initiating trade.

Almost 60% of the Chinese population is rural. Although the economic growth of China has been strong, this growth is almost completely confined to the urban areas. There is very little sign of progress that has happened in Chinese rural areas.

AGRINAS has facilitated farm industries in the rural communities of Yangqu county, Shanxi province. Farmers bring their products to a central point where people with skills have joined together into co-operatives to create factories to produce for example tomato paste, jam and juice. There is a cheese factory that requires up to 2 000 litres of milk each day. It not only provides jobs, but also teaches people new skills, such as commercial and management skills for farmers. Packaging and marketing centres create job opportunities and add value to the agricultural products made by the community. In this way, from grassroots beginnings economic and social development begins.

[Source: Adapted from the AGRINAS WEBSITE, "Projects"]

FIGURE 4.5: CASE STUDY – THE KOEBERG NUCLEAR POWER STATION

Cape Town's main energy supply was initially generated by the Athlone Power station. However because of a rapid increase in the population of Cape Town this energy supply became insufficient and uneconomical because large amounts of coal had to be transported from Mpumalanga to Cape Town.

The Koeberg Nuclear Power Station was built to generate energy to meet Cape Town's increased demand. It is currently the main energy supply of the Western Cape and nuclear energy can also be redistributed to the rest of South Africa during peak demand periods for electricity.

Koeberg Nuclear Power Station was originally located far outside the Cape Town area, but due to rapid growth over the past 20 years, suburban housing developments have moved closer and closer to the power station. The power station enforces strict housing regulations in case of evacuation due to nuclear radiation. For example no high rise buildings are allowed to be built in the vicinity. The power station is surrounded by an extensive nature reserve containing species of birds and small mammal species.

Koeberg Nuclear Power station uses two nuclear reactors to produce nuclear energy. The nuclear reactors are cooled by cold water from the Atlantic Ocean.

TOTAL: 225

