



## General Information for the case study:

WRL reference	M04 D02	
Module	M04 Ecosystems – Tropical Rainforests	
Data Set	D02 Quantifying forest disturbance in cloud forest	
Research objectives	<p>To investigate how habitat data collected from the 2013 field season can be used to quantify forest disturbance in the cloud forest of Cusuco National Park (CNP) in Honduras.</p> <ol style="list-style-type: none"> <li>1. Temporal analysis of forest disturbance in CNP:             <ol style="list-style-type: none"> <li>a. To decide on key disturbance indicators to measure in forest plots.</li> <li>b. To establish baseline data for 2013.</li> <li>c. To produce descriptive statistics and graphical representations of the 2013 data.</li> </ol> </li> <li>2. Spatial analysis of forest disturbance in CNP by comparing habitat plots within a transect and then 2 transect routes located in different areas of CNP: this method could then be adapted and used to compare data for subsequent years in order to detect change due to disturbance.</li> </ol>	
Keywords	Climate change; <b>Data handling; Deforestation; Ecosystem; Environmental monitoring; Field techniques; Human impact; Indicators; Rainforest; Sampling; Transects;</b>	
Potential Curriculum links	<b>AQA</b>	3.2.1; 3.2.11; 3.4.1; 3.9
	<b>Edexcel</b>	How Science Works; Unit 3 and 4; App.10
	<b>IB</b>	Topic 1; Topic 5; G.4.1; Option G
	<b>Camb.Pre-U</b>	5.1; 5.2;
	<b>OCR</b>	2.3.1; 2.3.4; 3.3; 5.3.1
	<b>WJEC</b>	5.8; BY6;
	<b>SQA</b>	Case studies; FH2J (3); HOAL (1); HOAM
	<b>CCEA</b>	2.2; 2.3; 4.4; Maths and Stats knowledge
Summary	<p>In 2013 120 20mx20m cloud rainforest plots were surveyed by students and scientists in Honduras. The survey will take place every year and the data used to quantify forest disturbance in Cusuco National Park. The datasets being produced are very large and this investigation looks at ways to analyze, compare and present the data. There are 4 tasks in which step-by-step instructions produce a wide spectrum of graphs and tables. There are also many opportunities to use the data for a discussion on the possible causes of any disturbance and threats to rainforest. It is also an opportunity for students to learn and experience how to handle large sets of data. The level of difficulty will depend on which examples and how much data students choose to analyze. Many of the data sets can be used to demonstrate statistical tests such as chi-squared and the t-test.</p> <p><b>Research Objectives 1 and 2: 7/10</b></p>	

