

越南溫室氣體減量政策實施優先度評估之研究

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摘要

氣候變遷將對人類生活造成許多負面的影響（包含農業、生物多樣性、人體健康等等...），最後的結果和一些國家的經濟發展、群眾生命有著密切的關係，特別是對於開發中又位於沿海地區的國家將會是個嚴重的影響。根據世界銀行報告指出，越南將會是其中一個受氣候變遷而導致海平面嚴重上升的開發中國家。如果海平面上升1公尺，越南全國將會有10.8%的人口受到影響；若是上升5公尺，影響的人口將會達到35%。另外海平面的上升，將會嚴重影響到越南國內的GDP（36%），緊接著將會衝擊到人口密集的都會區（41%）。本研究是通過由Saaty所開發的分析層級程序法（AHP）論及上述問題的運用，本研究採用AHP方法作為評估在越南推動不同溫室氣體減量方案的優先度。本研究建立四項評估因素：能源、產業、運輸與其他部分。每項評估因素下各建立三項評估準則（能源部門有減少煤炭消耗量、增量可再生能源和碳稅機制。產業中有嚴密的排放及效率的標準，控制傳統產業發展和推動節約能源機制。運輸部門則是升級公共交通系統，設定新的排放標準和增量生質燃料消耗量。在其他領域有控制林業覆蓋面，強化農田灌溉用水管理且加強全面廢棄物管理系統）和兩個減量模式方案【依現況自然發展（BAU）與積極推動減量（ARM）】。分析結果顯示工業部門被視為越南溫室氣體首要的減量對象（權重值為36.9%），其次是運輸部門（30.7%），第三是能源部門（23.9%），其他部門比重最低（8.5%）。對越南而言這結果反映了合理的現實情況，因為現在工業部門消耗超過40%的能量。分析結果亦顯示在各項評估準則中，嚴密的排放標準及提升公共交通是緩和溫室氣體的二種最佳的方式（各權重皆約為18.4%）；其次是減少煤炭消耗量佔12.8%，其餘各項總計佔50.4%；權重值最低的活動是在其他部門之下的強化農田灌溉用水管理，只佔1.4%。方案B（積極推動減量），包括減少溫室氣體排放與84.4%優先權重。方案A（依現況自然發展）的決策分析權重是15.6%。因受研究執行條件之限制，大多數的專家問卷受訪者都是越南籍環境專家，因而評估結果大幅傾向B方案是顯而易見的。

關鍵詞：溫室氣體（GHGs）、氣候變遷、分析層級程序法（AHP）、越南

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