

生態旅遊認知對濕地環境衝擊、環境態度與環境敏感度之影響

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摘要

本研究主要目的在探討生態旅遊認知對濕地環境衝擊、環境態度與環境敏感度之關係，並利用結構方程式模型進行驗證分析，利用便利抽樣方式針對彰化縣漢寶濕地的遊客進行調查，共發放600份問卷，回收問卷548份，剔除58份無效問卷後，計獲得有效問卷490份，經統計分析後所得結果如下；研究結果發現：(1) 遊客生態旅遊認知對於環境的感受、欣賞、關心的程度，生態旅遊的遊客對於濕地生態環境關心程度較高。(2) 遊客生態旅遊認知對於環境態度的環境開發、資源利用、環境認知，生態旅遊的遊客對於濕地生態環境資源利用關心程度越高。(3) 環境敏感度的關心、欣賞、感受程度對於環境造成正面的影響及負面性衝擊，生態旅遊的遊客對於濕地生態環境會產生正面的影響及負面性衝擊。(4) 環境態度的環境開發、資源利用、環境認知對於環境衝擊，生態旅遊的遊客對於濕地生態環境開發、資源利用、環境認知會正面性影響。

關鍵詞：生態旅遊認知、環境衝擊、環境態度、環境敏感度

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以旅遊動機為中介變項。休閒暨觀光產業研究, 1(1), 1-18。陳宜清, 林建任 (2007)。探討以生態指標應用於海岸油污染之環境敏感度的設定。第二十九屆海洋工程研討會, 頁469-474, 國立成功大學, 台南。陳建州 (1996)。我國高級職業學校工業類科教師能源認知及能源態度之研究。國立彰化師範大學工業教育研究所碩士論文, 未出版, 彰化縣。陳思利, 葉國樑 (2002)。環境行為與相關因素之研究--以屏東縣國中學生為例。環境教育學刊, 1, 13-30 陳昭明 (1980)。正視遊樂活動對環境之衝擊-兼對「水庫與水庫集水區開放觀光遊樂之商榷」一文質疑。臺灣林業6 (9), 1-3。陳寬裕, 王正華 (2010)。結構方程模式分析實務: AMOS的應用。臺北: 五南圖書公司。游以德 (2001)。環境問題探索。台北: 地景企業股份有限公司。楊舜安 (2009)。桃園縣復興鄉石門水庫集水區內原住民生態保育認知、管理策略與推展生態旅遊之研究。國立嘉義大學農學研究所碩士論文, 未出版, 嘉義縣。溫世頌 (1997)。教育心理學。台北: 三民書局。經濟部。2011年11月2日, 取 <http://www.moea.gov.tw/Mns/populace/home/TextSearch.aspx?txtSearch=%u570b&x=13&y=18> 葉重新 (2006)。心理學 (簡明版)。台北: 心理出版社。鄔建國 (2000)。景觀生態學—概念與理論。生態學雜誌, 19 (1), 42-52。歐陽燦暉 (1991)。環境污染與防治概論。教育部環境保護小組出版。榮泰生 (2008)。AMOS與研究方法。臺北: 五南圖書公司。鄧明宇, 李介至, 鄭鳳君 (2010)。心理學概論。新北市: 新文京出版圖書公司。蕭芸殷, 歐聖榮 (1998)。生態旅遊遊客特質之研究。戶外遊憩研究, 11(3), 35-58。蕭倩慧 (2008)。八卦山風景區居民生態旅遊認知與發展生態旅遊態度之研究。國立台灣師範大學碩士論文, 未出版, 台北。賴威任 (2001)。環境態度、生態觀光認知及人口統計變數對生態觀光產品選擇之研究。中國文化大學碩士論文, 未出版, 台北。謝淑芬 (2010)。觀光心理學。台北市: 五南圖書公司。鍾聖校 (1990)。認知心理學。台北: 心理出版社。顏家芝 (2006)。以地方社會結構為基礎探討居民對生態旅遊影響之認知。戶外遊憩研究, 19(3), 1-31。羅紹麟 (2001)。生態旅遊與森林遊樂。林業研究季刊, 23(1), 43-50。二. 英文部分。Ajzen, I. (1985). From Intentions to Actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), Action Control From Cognition to Behavior (pp.11-39). Heidelberg: Springer-Verlag. Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behaviour to leisure choice. Journal of Leisure Research, 24(3), 207-224. Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall. Allcock, J. B. (1994). Yugoslavia. In Szajkowski, B. (Ed.), Political Parties of Eastern Europe, Russia and the Successor States. (pp. 655-661). Harlow: Longman. Anderson, J. C., & Gerbing, D. W. (1998). Structural equation modeling in practice: A review and recommended two-step approach, Psychological Bulletin, 103(3), 411-423. Ap, J., & Crompton, J. L. (1998). Developing and testing a tourism impact scale. Journal of Travel Research, 37(2), 120-131. Axelrod, L. J., & Lehman, D. R. (1993). Responding to environmental concern: What factors guide individual action? Journal of Environmental Psychology, 13, 149-159. Ayala, C. J. (1996). The decline of the plantation economy and the Puerto Rican Migration of the 1950s Cesar. Latinos Studies Journal, 7(1), 61-90. Baglianib, M., Gattolin, M., Niccolucci, V., Patterson, T., & Tiezzi, E. (2004). The ecological footprint analysis for province of venice and the relevance of tourism. In C. B. and N. Marchettini (Ed.), The Sustainable City III: Urban Regeneration and Sustainable (pp. 123-131). UK: Wessex Institute of Technology. Bagozzi, R. P., & Yi, Y. (1988). On the evaluation for structural equation models. Journal of the Academy of Marketing Science, 16, 74-94. Bai, Y., Zeng, H., Wei, J. B., Zhang, W. J., & Zhao, W. (2008). Optimization of ecological footprint model based on environmental pollution accounts: a case study in Pearl River Delta urban agglomeration. Chinese Journal of Applied Ecology, 19(8), 1789-1796. Baker, M. (1997). Reengineering an engineering consultant, Journal of Management in Engineering, 13(2), 20-24. Baumgartner, H., & Homburg, C. (1996). Hans baumgartner, christian homburg applications of structural equation modeling in marketing and consumer research: a review. International Journal of Research in Marketing, 13(2), 139 – 161 Belsky, J. (1999). Misrepresenting communities: The policy of community-based rural ecotourism in gales point manatee. Belize. Rural Sociology, 64(4), 641-666. Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures, Psychological Bulletin, 88(3), 588-606. Berkowitz, L. (1993). Aggression: Its causes, consequences, and control. New York: McGraw-Hill. Bigge, M. L. (1971). Learning theories for teachers, New York: Harper and Row.10-14. Blamey, R. K. (1997). Ecotourism: The search for an operational definition. Journal of Sustainable Tourism, 5(2), 109-130. Blangy, S., & Epler W. M. (1992). Developing and implementing ecotourism guidelines for wildlands and neighbouring communities. North Bennington, VT: The Ecotourism Society. Boo, E. (1990). Ecotourism: The potentials and pitfalls, Washington D.C.: World Wildlife Fund. Boyd, S. W., & Butler, R. W. (1996). Managing ecotourism: an opportunity spectrum approach, Tourism Management. 17(8), 557-566. Brida, J. G., & Risso, W. A. (2010). Tourism as a determinant of long-run economic growth. Journal of Policy Research in Tourism, Leisure and Events. 2(1), 14-28. Brockelman, W. Y., & Dearden, P. (1990). The role of nature trekking in conservation: A Case-Study in Thailand. Environmental Conservation. 17, 141-148. Bronfenbrenner, U. (1979). The ecology of human development. Cambridge, MA: Harvard University Press. Brougham, J. E., & Bulter, R. W. (1981). A segmentation analysis of resident attitude to the social impact of tourism. Annals Tourism Research, 8(4), 569-589. Buckley, R. (1994). A framework for ecotourism, Annals of Tourism Research, 21(3), 661-669. Buckley, R. (2000). Tourism in the most fragile environments. Tourism Recreation Research, 25, 31-40. Buckley, R.C. (2009). Ecotourism: Principles and practice, Wallingford: Centre for Agricultural Bioscience International. Cardenas-Torres, N., Enriquez-Andrade, R., & Rodriguez-Dowdell, N. (2007). Community-based management through ecotourism in Bahia de los Angeles, Mexico. First Research, 84(1), 114-118. Caron, J. A. (1989). Environmental perspectives of blacks: Acceptance of the new environmental paradigm. The Journal of Environmental Education, 15(2), 5-8. Catton, W., & Dunlap, R. (1978). Environment sociology: A new paradigm. American Journal of Sociology, 13, 41-49. Catton, W., & Dunlap, R. (1980). A new ecological paradigm for post-exuberant sociology. American Journal of Science, 24, 15-47. Ceballos, L. H. (1983). Tourism, ecotourism and protected areas. In J. A. Kusler (Ed.), Ecotourism and resource conservation: Ecotourism Conservation Project. Ceballos, L. H. (1987). The future of ecotourism. Mexico Journal, January, 13-14. Ceballos, L. H. (1993). Ecotourism as a World-wide Phenomenon. In K. L. a. D. Hawkins (Ed.), Ecotourism: A Guide for Planners and Managers (pp. 12-14), North Bennington, VT: Ecotourism Society. Chan, R. Y. (1999). Environmental attitudes and behavior of consumers in China. Journal

of International Consumer Marketing, 11(4), 25-52. Chawla, L. (1998). Significant life experience revisited: A review of research on sources of environment sensitivity. *Environmental Education Research*, 4(4), 369-382. Chawla, L. (1999). Life paths into effective environmental action. *Journal of Environmental Education*, 31(1), 15-26. Clark, R. N., & Stankey, G. H. (1979). The recreation opportunity spectrum: A framework for planning, management, and research. (Gen. Tech. Report PNW-98). Portland, OR: USDA Forest Service, Pacific Northwest Forest and Range Experiment Station. Clements, C. J. (1993). The perceived impacts of tourism on the Mississippi National River and recreation area (Recreation areas, Minnesota), unpublished Minnesota. Clifton, J., & Benson, A. M. (2006). Planning for sustainable ecotourism: The case for research ecotourism in developing country destinations. *Journal of Sustainable Tourism*, 14(3), 238-254. Cohen, E. (1988). Authenticity and commoditization in tourism. *Annals of Tourism Research* 15, 371-386. Cohen, M. R. (1973). Environmental information versus environmental attitudes. *Journal of Environmental Education*, 20(2), 5-8. Cole, D. N. (1987). Research on soil and vegetation in wilderness: A State-of-Knowledge review, USDA Forest Service GTR INT-220, 135-177. DeVellis, R. F. (1991). Scale development: Theory and applications, applied social research methods series, Newbury Park, California: Sage Publications. Dodds, R., & Butler, R. (2010). Barriers to implementing sustainable tourism in mass tourism destinations. *Tourismos Journal*, 5(1), 35-54. Doll, R., Peto, R., Wheatly, K., Gray, R., & Sutherland, I. (1994). Mortality in relations to smoking: 40 years' observation on male doctors. *British Medical Journal*, 309, 901 – 911. Dolnicar, S. (2006). Nature-conserving tourists: The need for a broader perspective. *Anatolia*, 17(2), 235-256. Dolnicar, S., Crouch, G. I., & Long, P. (2008). Environment-friendly tourists: What do we really know about them? *Journal of Sustainable Tourism*, 16(2), 197-210. Donohoc, H. M., & Needham, R. D. (2006). Ecotourism: The contemporary definition. *Journal of Ecotourism*, 5(3), 192-210. Driver, B. L., & Brown, P. J. (1978). The opportunity spectrum concept and behavioral information in outdoor recreation supply inventories: A rationale. In proceedings of the integrated and renewable resource inventories workshop. General Technical Report. RM-55, 24-31. First. Collins, CO: USDA Forest Service, Rocky Mountain Forest Experiment Station. Dunlap, E. R., & Van Liere, K. D. (1978). The new environmental paradigm: A proposed measuring instrument and preliminary results. *The Journal of Environmental Education*. 9, 10-19. Eagles, J. F., & Blackwell, R. D. (1995). Consumer behavior, Dryden Press. Eagles, P. F. J. (1999). Maloti-drakensberg transfrontier conservation and development area project mission report on tourism to the world bank. (Unpublished report). Washington, DC: World Bank. Edington, J. M., & Edington, M. A. (1986). Ecology, recreation and tourism. UK: Oxford University Press. Erb, K. H. (2004). Actual land demand of Austria: A variation on ecological footprint assessments. *Land Use Policy*, 21(3), 247-259. Fennell, D. A. (2000). What's in a name? Conceptual is natural resource-based tourism. *Tourism Recreation Research*, 25(1), 97-100. Fennell, D. A., & Eagles, P. F. J. (1990). Ecotourism in Costa Rica: A conceptual framework. *Journal of Park and Recreation Administration*, 8(1), 23-24. Festinger, L. (1957). A theory of cognitive dissonance. Stanford, CA: Stanford University Press. Fillion, F., Foley, L., James, P., & Jacquemot, A. (1992). The Economics of Global Ecotourism. Paper Presented at the Fourth World Congress on National Parks and Protected Areas. Caracas, Venezuela. Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behavior: An introduction to theory and research Reading (MA): Addison-Wesley. Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable and measurement error. *Journal of Marketing Research*, 18(2), 39-50. France, L. (1997). Introduction. In L. France (Ed.), *The earthscan reader in sustainable tourism* (1-22). London: Earthscan. Getz, G. (2002). Why festivals fail, *Event Management*, 7, 209-219. Gifford, A., Compagno, L.J.V., Levine, M., & Antoniou, A. (2007). Satellite tracking of whale sharks using tethered tags. *Fisheries Research*, 84(1), 17-24. Gifford, D. (1997). The value of going green. *Harvard Business Review*, 75, 11-12. Gillbanks, D. (2010). The good travel & tourism wiki. Retrieved October 16, from <http://www.goodtravelwiki.com/page/Positive+&+Negative+Impacts+of+Tourism> Goldstein, K. M., & Blackman, S. (1978). Cognitive style: Five approaches and relevant research. New York: Wiley. Goodwin, H. (1996). In pursuit of ecotourism. *Biodiversity and Conservation*, 5, 277-292. Grace, K., & Ding, C. (2005). Developing a multicriteria approach for the measurement of sustainable performance, Australia, *Building Research and Informatio*. 33(1), 3-16. Grenier, D., Kaae, B. C., Miller, M. L., & Mobley, R. W. (1993). Ecotourism, landscape architecture and urban planning, *Landscape and Urban planning*, 25, 1-16. Gronau, W., & Kaufmann, R. (2009). Tourism as a stimulus for sustainable development in rural areas: A cypriot perspective. *Journal of Tourismos*, 4(1), 83-96. Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C., (1998). *Multivariate Data Analysis* (5th ed.), Englewood Cliffs, NJ : Prentice-Hall. Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (1992). *Multivariate Data Analysis* (6th ed.), New York: Macmillan. Hair, J. F., Rolph, E. A., Ronald, L. T., & William, C. B. (1998). *Multivariate data analysis* (5th Ed.), UK: Prentice Hall International. Hall, C. M., & Boyd, D. S. (2003). *Ecotourism in peripheral areas*, Clevedon, UK: Channel View Publications . Hall, C. M., & Boyd, S. (2006). *Nature based tourism in peripheral areas, development or disaster ?* New Delhi, Viva Books. Hammond, K. R. (1996). *Human Judgment and Social Policy: Irreducible uncertainty, inevitable error, unavoidable injustice*. New York: Oxford University Press. Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling*. Cary, NC: The SAS Institute. Heidarabadi, S. M. (2008). Strategies for planning domestic and international tourism development of Qom province with emphasis on religious tourism. Unpublished Master Thesis. Lulea, Sweden: Lulea University of Technology. Hetzer, N. D. (1965). *Environment, Tourism, Culture*. Links (July): Reprint in *Ecosphere*, 1(2), 1-3. Himmelfarb, S. (1993). The measurement of attitudes. In A. H. E. S. Chaiken (Ed.), *The psychology of attitudes* (pp. 23-87). New York: Harcourt, Brace, Jovanovich. Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education*. 18(2), 1-8. Honey, M. (1999). *Ecotourism and sustainable development: Who owns paradise*. Washington, DC: Island Press. Honey, M. (2001). *Ecotourism and sustainable development: Who owns paradise?* Washington, DC: Island Press. Honey, M. (2008). *Ecotourism and sustainable development: who owns paradise?* (2nd ed.), Island Press, Chicago. Hsu, S. J., & Roth, R. E. (1996). An assessment of environmental

knowledge and attitudes held by community leaders in the Hualien area of Taiwan. *The Journal of Environmental Education*, 28(1), 24-31. Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: criteria versus new alternatives, *Structural Equation Modeling*, 6(1), 1-55. Hungerford, H. R., & Tomera, A. N. (1985). Selected predictors of responsible environmental behavior: An analysis. *The Journal of Environmental Education*, 17(2), 31-40. Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, 21(3), 8-21. Hunter, C. (2002). Sustainable tourism and the tourist ecological footprint, *Environment Development and Sustainability*, 4, 7-20. Hvenegaard, G. (1994). Ecotourism: A status report and conceptual framework. *The Journal of Tourism Studies*, 5(2), 24-35. Hvenegaard, G. T. (2002). Using tourist typologies for ecotourism research. *Journal of Ecotourism*, 1(1), 7-18. Irmi, S., & Tisdell, C. A. (1999). Carrying capacity reconsidered: From malthus population theory to cultural carrying capacity, *Ecological Economics*, Elsevier, 31(3), 395-408. Jacobson, S. K., & Robles, R. (1992). Ecotourism, sustainable development, and conservation education: Development of a tour guide training program in Tortuguero, Costa Rica. *Environ. Manage.* 16(6), 701 – 713. James, L. R., Mulaik, S.A., & Brett, J.M. (1982). *Causal analysis: Assumptions, models, and data*. Beverly Hills, CA: Sage. Jenerette, G.D., & Larsen, L. (2006). A global perspective on changing sustainable urban water supplies. *Global Planet. Change*, 50(3), 202-211. Johnson, P.A. (2003). Exploring the ecological footprint of tourism in Ontario. Unpublished doctoral dissertation, University of Waterloo, Ontario. Johnson, S. A., Bjorndal, K. A., & Bolten, A. B. (1996). Effects of organized turtle watchers on loggerhead caretta. Nesting behavior and hatchling reproduction in Florida. *Conservation Biology*, 10, 570-577. Joreskog, K. G., & Sorbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*, Chicago: Scientific Software International. Kaiser, F. G. (1998). A general measure of ecological behavior. *Journal of Applied Social Psychology*, 28, 395-422. Kaiser, F. G., & Shimoda, T. A. (1999). Responsibility as a predictor of ecological behavior. *Journal of Environmental Psychology*, 19, 243-253. Kaiser, F. G., Oerke, B., & Bogner, B. X. (2007). Behavior based environmental attitude: Development of an instrument for adolescents. *Journal of Environmental Psychology*, 27, 244-251. Kalantari, K.H., & Asadi, A. (2010). Designing a structural model for explaining environmental attitude and behaviour of urban residents (Case of Tehran). *International Journal of Environmental Research*, 4(2), 309-320. Karmakar, M. (2011). Ecotourism and its impact on the regional economy-a study of north Bengal (INDIA): *Tourismos An international tidisciplinary*. *Journal of Tourism*, 6(1), 251-270. Karmakar, M., & Ray, R. R. (2011). Current trends in research and application of microbial cellulases. *Research. Journal of Applied Microbiology*, 6, 41-53. Kerner, M. S., & Kalinski, M. I. (2002). Scale construction for measuring adolescent boys' and girls' attitudes, beliefs, perception of control, and intention to engage in leisure-time physical activity. *Perceptual and Motor Skills*, 95, 109-117. Kimmel, J. R. (1999). Ecotourism as environmental learning. *The Journal of Environmental Education*, 30(2), 40-44. Kiss, A. (2004). Is community-based ecotourism a good use of biodiversity conservation funds? *Trends in Ecology & Evolution*, 19, 232-237. Kontogeorgopoulos, N., & Chulikavit, K. (2010). Supply-side perspectives on ecotourism in Northern Thailand. *International Journal of Tourism Research*, 12, 627-641. Kotler, P. (2000). *Marketing management: Analysis, planning. Implementation and Control*, (10th ed.). Englewood Cliffs, NJ: Prentice-Hall. Kuo, I. L. (2002). The effectiveness of environmental interpretation at resource sensitive tourism destinations. *International Journal of Tourism Research*, 4, 87-101. Kusler, J. A., & Riexinger, P.(1986). The regulators perspective. The proceedings of the national wetland assessment symposium. association of state wetland managers, Association of State Wetland Managers. Kusler, J. A. (1989). No net loss and the role of wetlands restoration and creation in a regulatory context. *The Proceedings: Urban Wetlands*. Association of State Wetland Managers, Berne, New York. Kutay, K. (1989). The new ethic in adventure travel. *Buzz Worm*, 1(4), 31-36. Laarman, J. G., & Durst, P. B. (1987). Nature travel in the tropics. *Journal of Forestry*, 85(5), 43-46. Langston, C., & Grace, D. K. (2001). *Sustainable practices in the built environment*, (2nd Ed.) Butterworth-Heinemann Linacre House Jordan hill Oxford. Lankford, S.V., & Howard, D. (1994). Developing a tourism impact attitude scale. *Annals of Tourism Research*, 21(1), 121-139. Laurance, W. F., Alonso, A., Lee, M., & Campbell, P. (2006). Challenges for forest conservation in Gabon, Central Africa. *Futures*, 38(4), 454-470. Lee, M. S., San, Y. H., & Hsu, Y. R. (2011). A study of the key success factors of the ecotourism industry in Taiwan. *African Journal of Business Management*, 5(2), 627-640. Lenzen, M., Hansson, C.B., & Bond, S. (2007). On the bioproductivity and land-disturbance metrics of the ecological footprint. *Ecology. Economic*, 61, 6-10. Lindberg, K., Enriquez, J., & Sproule, K. (1996). Ecotourism questioned: Case studies from Belize. *Annals of Tourism Research*, 23, 543-562. Lindsey, P. A., Roulet, P. A., & Romanach, S.S. (2007). Economic and conservation significance of the trophy hunting industry in sub-Saharan Africa. *Biological Conservation*, 134(4), 455-469. Lockhart, T. E. (1997). The ability of elderly people to traverse slippery walking surfaces, *Proceedings of the Human Factors and Ergonomics Society 41st Annual Meeting*, 1, 125-129. Lucas, R. B. (1984). *Pathology of tumours of the oral tissue*. New York: Churchill Livingstone. Madrigal, R. (1995). Cognitive and affective determinants of fan satisfaction with sporting event attendance. *Journal of Leisure Research*, 27(3), 205-227. Madrigal, R. (1995). Residents' perceptions and the role of government. *Annals of Tourism Research*, 22(1), 86-102. Maloney, M. P., & Ward, M. P. (1973). Ecology: Let ' s hear from the people: An objective scale for the measurement of ecological attitudes and knowledge, *American Psychologist*, 28(1), 583-586. Mathieson, A., & Wall, G. (1982). *Tourism: Economic, physical and social impacts.*, New York: Longman. McGregor, P.G., Swales, J.K., & Turner, K. (2008). The CO2 trade balance between Scotland and the rest of the UK: Performing a multi-region environmental input-output analysis with limited data. *Ecology Economic*, 66(4), 662-673. Menzel, R. (2012). Learning and memory: Commentary. *Honeybee Neurobiology and Behavior*, 6, 485-492. Metzger, T., & McEwen, D. (1999). Measurement of environmental sensitivity. *The Journal of Environmental Education*, 30(4), 38-39. Milfont, T. L. (2007). *Psychology of environmental attitudes: A cross-cultural study of their content and structure*. Unpublished doctoral dissertation, Auckland. New Zealand: University of Auckland. Milfont, T. L. (2007a). Different approaches to the dimensionality of environmental concern. Paper presented at the 31st Interamerican Congress of Psychology, Mexico. Mill, R. C. (1992). *The tourism system: An Introductory Text*, (2nd ed.), New Jersey:

Prentice-Hall. Miller, G. F. (2000). *The mating mind: How sexual choice shaped the evolution of human nature*. New York: Miller, M. L., & Kaae, B. C. (1993). Coastal and marine ecotourism: a formula for sustainable development? *Trends*, 30, 35-41. Mirzaie, K., Fesharaki, M. N., & Daneshgar, A. (2012). Trust modeling based on capra cognitive framework, *Procedia - Social and Behavioral Sciences*, 32, 197 – 203. Mitsch, W. J., & Gosselink, J.G. (1993). *Wetlands* (2nd Ed.). New York: van Nostrand Reinhold. Mullen, B., & Johnson, C. (1996). *The psychology of consumer behavior*, New Jersey: Lawrence Erlbaum Associates. Muller, F. G. (2000). Ecotourism: An economic concept for ecological sustainable tourism. *International Journal of Environment studies*, 57(3), 241-252. Murray, M. I. (2000). *The ecological footprint of Balears. The impacts of mass tourism*. Unpublished doctoral dissertation, University of Edinburgh, Edinburgh. Newsome, S. D., Etnier, M. A., Auriolos-Gamboa, D., & Koch, P.L. (2006). Using carbon and nitrogen isotope values to investigate maternal strategies in northeast Pacific Otariids. *Marine Mammal Science*. 22, 556 – 572. Nicholas, L. N., Thapa, B., & Ko, Y. J. (2009). Residents' perspectives of a world heritage site. The Pitons Management Area, St. Lucia. *Annals of Tourism Research*, 36(3), 390 – 412. NOAA (2002). *Environmental sensitivity index guidelines*. Seattle, WA :NOAA Technical Memorandum NOSOR & R11, Seattle, WA. Obua, J., & Harding, D. M. (1997). Environmental impact of ecotourism in Kibale National Park, Uganda. *Journal of Sustainable Tourism*, 5, 213 – 223. Ok, K., Okan, T., & Yilmaz, E. (2011). A comparative study on activity selection with multicriteria decision-making techniques in ecotourism planning. *Scientific Research and Essays*, 6(6), 1417-1427. Orams, M. B. (1996). Using interpretation to manage nature-based tourism. *The Journal of Sustainable Tourism*, 4(2), 81 – 94. Pacific Asia travel association (1991). Available at: <http://www.pata.org/patasite/index.php?id=33> Palacio, V., & McCool, S. F. (1997). Identifying ecotourists in Belize through benefit segmentation: A preliminary analysis. *Journal of Sustainable Tourism*, 5(3), 234-243. Park, J., & Chang, N. (1998). The development and effects of a teaching strategy to forest environmental sensibility. *Environmental education and information*, 17(2), 167-178. Peng, H. P., & Mao, G. G. (2004). A study of strategic development of rural ecotourism in Taiwan. *Land Issues Research*. 3(2), 86-100. Perdue, R. R., Long, P. T., & Allen, L. (1990). Resident support for tourism development. *Annals of Tourism Research*, 17(4), 586-599. Peterson, N. (1982). Developmental variables affecting environmental sensitivity in professional environmental educators. Unpublished master's thesis, Southern Illinois University, Carbondale. Pickett, G. M., Kangun, N., & Grove, S. J. (1993). Is there a general conserving consumer? A public policy concern. *Journal of Public Policy & Marketing* 12, 234-243. Pickett, S. A., & Greenley, J. R., & Greenberg, J. S. (1995). Off-timedness as a contributor to subjective burdens for parents of offspring with severe mental illness. *Family Relations*, 44, 195 – 201. Pizam A., & Milman, A. (1984). The social impacts of tourism, *UNEP Industry and Environment*, 7(1), 11-14. Rashid, I. (2009). *Biology of some invasive species of asteraceae in kashmir*. Unpublished Ph. D. thesis. University of Kashmir, Jammu and Kashmir, India. Rogerson, C. M., & Zoleka, L. (2005). *Sho't left: Changing domestic tourism in South Africa*. *Urban Forum*, 16(2), 88-111. Ryan, C., & Saward, J. (2004). The zoo as ecotourism attraction-visitor reactions, perceptions and management implications. *Journal of Sustainable Tourism* 12, 245-266. Scheyvens, R. (2000). Promoting women's empowerment through involvement in ecotourism: experiences from the third world. *Journal of Sustainable Tourism*. 8(3), 232-249. Schoof, M. R. (1999). *Consumer behavior*. New Jersey: Prentice-Hall. Schultz, P.W., & Oskamp, S. (1997). The motivational bases for environmental concern. Paper presented at the Society of Experimental Social Psychology, Toronto, Canada. USEPA Science Advisory Board. *Toward Integrated Environmental Decision-Making*. Washington, DC: US Environmental Protection Agency. Schultz, P.W., & Zelezny, L. (1999). Values as predictors of environmental attitudes: evidence for consistency across 14 countries. *Journal of Environment Psychology*, 19, 255-65. Schultz, P.W., Shriver, C., Tabanico, J.J., & Khazian, A.M. (2004). Implicit connections with nature. *Journal of Environmental Psychology*, 24, 31-42. Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum Associates. Scott, D., & Willits, F. K. (1994). Environmental attitudes and behavior: A pennsylvania survey. *Environment and Behavior*, 26(2), 239-260. Seidl, I., & Tisdell, C. A. (1999). Carrying capacity re-considered: From Malthus' population theory to cultural carrying capacity. *Ecological Economics*, 31(3), 395-408. Sharpley, R. (2006). Ecotourism: a consumption perspective. *Journal of Ecotourism*, 5(2), 7-22. Sia, A. P. (1985). An investigation of selected predictors of overt responsible environmental behavior. Unpublished Doctoral dissertation, Southern Illinois University at Carbondale. Sivek, D. J., & Hungerford, H. (1989/90). Predictors of responsible behavior in members of three Wisconsin conservation organizations. *The Journal of Environmental Education*, 21(2), 35-40. Skanavis, C., & Sakallari, M. (2011). International tourism, domestic tourism and environmental change: Environmental education can find The balance: *Tourismos An International Multidisciplinary Journal of Tourism*, 6(1), 233-249. Song, W. W., Liu, N. F., & Xie, H.Y. (2005). Study on ecological impact of a project by total ecological footprint. *Journal of Huazhong University of Science and Technology-Urban Science*, 22(1), 85