Recreational Value of Mangrove Forest and Tourist Willingness to Pay for Mangrove Conservation

by Endah Saptutyningsih Saptutyningsih

Submission date: 25-May-2020 10:44AM (UTC+0700)
Submission ID: 1331331650
File name: Bidang_C.15-Endah_S.pdf (2.7M)
Word count: 3924
Character count: 20935

ATLANTIS PRESS

Advances in Social Science, Education and Humanities Research, volume 353

Third International Conference on Sustainable Innovation 2019 – Humanity, Education and Social Sciences (IcoSIHESS 2019)

Recreational Value of Mangrove Forest and Tourists Willingness-to-Pay for Mangrove Conservation

Diswandi
Faculty of Economics and Business
Universitas Mataram
Indonesia
diswandi@unram.ac.id

Endah Saptutyningsih
Faculty of Economics and Business
Universitas Muhammadiyah Yogyakarta
Indonesia
endahsaptuty@umy.ac.id

Abstract*—Mangrove forests produce ecosystem services benefitting human beings such as protection from tsunamis, abrasion, carbon sequestration; a place for fish nesting; and also for recreational purposes. However, the values of mangrove forests including their recreational value are often ignored. Several mangrove forests have been converted to other uses that commonly produce a more marketable product such as shrimp farming. Resultantly, loss of mangrove forests could lead to massive economic losses for the surrounding community once a disaster such as tsunami occurs. This paper analyzes the recreational value of mangrove forests and estimate the determinant of tourists' willingness-to-pay (WTP) for mangrove conservation. A mangrove forest in West Lombok Indonesia was chosen for the case study. Travel cost method was employed to capture the mangrove recreational value. A logit regression model was run to estimate the determinant of tourist' WTP for mangrove conservation. The findings depict that an average recreational value of mangrove forest as much as IDR 1,269,950 (USD 87.58) per visitor per year. The tourists' income, age, and distance of mangrove forest from home are significantly influencing their WTP for mangrove forest conservation. This paper has recommended that related policy makers improve tourism facilities to attract more visitors.

***Keywords*— travel cost method; mangrove forest; willingness to pay; conservation; recreation.**

I. INTRODUCTION

Mangrove forests that function as a buffer zone of land to the sea provide a variety of economic and environmental products and services that are beneficial for the surrounding community. However, economic needs are putting pressure on mangrove ecosystems to be converted to other alternative uses such as urban development, expansion of agriculture, and aquaculture (Giri, et al., 2008) with negative consequences for the environment (Sathirathai & Barbier, 2001).

In fact, the total economic value of a mangrove forest is not merely in the form of the marketable goods and services it produces. For instance, a mangrove forest that is designated as an ecotourism site can bring intangible benefits to the visitor. The intangible benefits of such environmental products can be measured using the contingent valuation method (CVM) and travel cost method (TCM). These methods offer a more comprehensive valuation of goods and services provided by ecosystems such as mangroves.

The travel cost method estimates the recreation value of a site with a price proxy that is reflected by the visitors' expenditures during their visit (Smith, 1989). Meanwhile, CVM is employed to assess the value of goods and services that are unavailable in a market system. By describing a hypothetical market for the goods and directly asking about the willingness-to-pay (WTP), we can elicit the demand for a specified quantity or quality of environmental goods and services (Mitchell & Carson, 1989).

In West Lombok Indonesia, a mangrove forest namely Lembar Mangrove Forest has been developed as a tourist attraction. The natural beauty offered by the mangrove forest attracts domestic and foreign tourists. In addition, the concept of education tourism was developed in such a way that this forest can be used as a laboratory for the development of science. The local community also indirectly benefit from the mangrove forest in the form of storm protection. In addition, fishermen who live in the surrounding area of the mangrove forest also benefit from the variety of fish thanks to the existence of the mangrove forest (Authors' survey, 2018).

Ironically, the condition of this mangrove forest continues to be damaged. Based on data provided by the related authority–Forestry Service of West Nusa Tenggara (NTB) Province, until 2014, around 65% mangrove forests in this location were damaged. Similar conditions also occur in almost all mangrove forests in West Lombok (see Figure 1).

Figure 1. Mangrove area in West Lombok

Ongoing damage to mangrove forests needs to be stopped in order to prevent wider damage that can influence the lives of surrounding people. Economic valuation methods can contribute to this matter by estimating the mangrove forest value from the perspective of relevant stakeholders, including communities, fishermen and tourists. By knowing the value of the mangroves, further policies can be formulated to protect the mangrove forests in the long term.

However, there is still a lack of research estimating the recreational value and WTP for mangrove forest conservation in developing countries. Therefore, this present study is attempting to fill this literature gap. This study aims to analyze

the recreational value of the mangrove forest and estimates the determinant of tourists' WTP for mangrove conservation.

II. RESEARCH METHOD

A. *Study site*

This study was conducted in Lembar Mangrove Forest in West Lombok, Indonesia. This forest was chosen for the study due to its evident appeal to tourists and its significant potential as a tourism site. The TCM and CVM were employed to estimate tourists' WTP for visiting Lembar Mangrove Forest.

B. *Survey Design*

The survey involved 140 visitors in the study site to investigate their travel costs and willingness to pay for entry into the mangrove forest. The sample size for the survey was determined by the Slovin formula. Prior to the CVM survey, we conducted a focus group discussion (FGD) with 20 visitors to determine the average WTP to conserve the mangrove forest, that would be used later to design the survey questions. We determined that the minimum entry fee would be IDR 5,000 (USD 0.36) though the average WTP turned out to be IDR 10,500. The former was the entry fee that they pay for visiting mangrove forest. The latter was the an average WTP determined in the FGD (USD 0.72). This amount of money was then used as a value of WTP to define whether the visitors would be willing to pay or not. This was asked through the questionnaire to the rest of the respondents. Following the FGD, direct questionnaires were conducted with 140 visitors. This study was conducted through hands-on the questionnaire (direct questionnaire). The survey respondents were asked whether they would be willing to pay USD 0.72 to conserve the mangrove forest.

C. *Data Analysis*

As mentioned above, this study employed TCM and CVM to assess the recreational value of the Lembar Mangrove Forest. There are two primary assumptions in the TCM analysis. Firstly, Lembar is one of the most promising ecotourism sites available to visitors in Lombok. Secondly, developing the Lembar Mangrove Forest for ecotourism will improve the tourism industry performance in West Lombok. In this study, we investigate the influence of the site quality on the demand for ecotourism that can determine policies for the mangrove forest management (Kling, 1986; Smith, 1989), and the impact on consumer surplus (i.e. by developing mangrove conservation for ecotourism in West Lombok).

i. Travel Cost Method (TCM)

In this study, we use the number of visits as a function of the travel cost, socio-demographic variables such as age, income, sex and education and the characteristics of the site visited and environmental awareness of visitors. The estimation of the demand function was:

$$X_i = \alpha_0 + \alpha_1 TC + \alpha_2 sosdem_i + \alpha_3 distance_i + \alpha_3 env.awareness_i + e_i \quad (1)$$

X_i is the number of visits of visitor *i* to the mangrove f over the previous year; TC is the travel cost of the visit t site by *i*; *sosdem* is the vector indicating the socio-demographic characteristics; *distance* is the distance between visitors' home to the mangrove forest; *env.awareness* is the subjective perception of the need for mangrove conservation and protection.

To estimate the demand function, the basic assumptions are sufficient variation in travel costs. Relevant socioeconomic and demographic variables such as income, age, education, and also the price of related substitution goods and services should be included in the model (Hof & Rosenthal,1987). In this study, we surveyed 150 tourists who visited the mangrove forest in June 2018.

We employed three econometric models to estimate the demand of Lembar Mangrove Forest. These models were then applied for measuring the welfare of visitors annually. The functional forms are linear (Model I); semi-log (Model II) where the dependent variable is converted with natural logarithm; and a log-log (Model III) where both the dependent and the independent variables are converted with natural logarithms. Thus, the econometric models of this study as follows:

$$\text{Model I: visit} = \beta_0 + \beta_1 TC_i + \beta_2 \text{income}_i + \beta_3 \text{age}_i + \beta_4 \text{sex}_i + \beta_5 \text{educ}_i + \beta_6 \text{distance}_i + \beta_7 \text{env.awareness}_i + \varepsilon_i \quad (2)$$

$$\text{Model II: lnvisit}_i = \beta_0 + \beta_1 TC_i + \beta_2 \text{income}_i + \beta_3 \text{age}_i + \beta_4 \text{sex}_i + \beta_5 \text{educ}_i + \beta_6 \text{distance}_i + \beta_7 \text{env.awareness}_i + \varepsilon_i \quad (3)$$

$$\text{Model III: lnvisit}_i = \beta_0 + \beta_1 \ln TC_i + \beta_2 \text{lnincome}_i + \beta_3 \text{lnage}_i + \beta_4 \text{sex}_i + \beta_5 \text{lneduc}_i + \beta_6 \text{lndistance}_i + \beta_7 \text{env.awareness}_i + \varepsilon_i \quad (4)$$

ii. Contingent Valuation Method (CVM)

Hanemann (1984) introduced the CVM model to estimate the WTP of visitors to improve the facilities in the ecotourism site. The contingent valuation method is a stated-preference technique that constructs a hypothetical market to measure WTP or the willingness to accept of survey participants for certain changes in natural resources (Loomis, 2002; Herrera et al., 2004; Zhongmin et al., 2003). The logit function was employed to estimate the respondents' answer. The 'yes' or 'no' answer to the bid amount of IDR10,500 (0.72 USD) became the dichotomous choice variables in estimating the logit function. The general form of the logit function is:

$$Pr[Yes] = \left(1 + exp(-f(x))\right)^{-1} \quad (5)$$

and

$$Pr[No] = (1 - Pr[Yes]) = \left(1 + exp(f(x))\right)^{-1} \quad (6)$$

where f(x) is a function of variables (including the bid amount) which are expected to predict the respondents' answers to the WTP questions.

In this study, WTP for mangrove forests was modeled as a function of travel cost, socio-demographic characteristics, distance and environmental awareness of tourists on mangrove conservation and protection. The following functional relationship was estimated using the OLS technique.

$$\log(WTP_i) = f(TC, Income_i, Age_i, Sex_i, Educ_i, Distance_i, Env.awareness_i) \quad (7)$$

In this model, income, age, sex, and education of tourists were included as control variables that may determine the WTP.

III. Result and Discussion

The results showed that about 70% of visitors were willing to pay for mangrove forest conservation of IDR 10,500 (USD 0.72). This amount is the average person's WTP for mangrove conservation that we generated from an FGD that had been conducted prior to the survey.

Table 1. Summary statistics of variables

Variable	Mean	Standard Deviation
visit	3.77	1.503
WTP	.69	.464
TC	65564.36	55957.73
income	1429702.97	995117.536
age	26.21	9.849
sex	.49	.502
educ	11.93	3.077
distance	26.79	18.143
env.awareness	4.69	.464

In the above table, we can see that the average number of visits to the Lembar Mangrove Forest was about four times. The travel cost paid by the respondents was IDR 65,600 on average. The average monthly income was IDR 1,429,700; average age was 26.2; average length of education was 12 years; and average distance from their residence was 26.79 kilometers.

A. Travel Cost Method

The user benefits of visiting the recreational sites such as parks, beaches, ecotourism and heritage sites can be estimated using Travel Cost Method or TCM (Liston-Heyes & Heyes, 1999). This study follows several previous studies (Ben-Akiva, Lerman & Lerman, 1985; Musser, & Hill, 1980; Feenberg & Mills, 1980; Kling, 1986; Smith, 1989; Zeimer) to determine a number of functional forms. The Ordinary Least Squares (OLS) estimation results for each functional form is presented in Table 3. The Box-Cox test concluded that the linear equation provided a better fit for the data than the other specification. The null hypothesis of homoskedasticity was rejected as expected with the linear model, using the Breusch–Pagan test.

Based on the estimation of the travel cost coefficient of the mangrove forest, there is a consistency between the estimation results and the demand theory, namely the inverse relationship between quantity demanded and price or travel cost. The travel cost variable had a negative and significant influence on the number of visits to the mangrove forest at a 95% level for the linear model. Among the socio-demographic characteristics, the ones that had a positive and significant impact on the number of visits to the mangrove forest at a 95% level was age. Income, sex, and education had no significant impact on linear model specifications. These were in line with previous studies related to ecotourism valuation (Pengwei & Jia, 2012; Baral et al., 2008; Cheung & Jim, 2013; Pengwei & Zhong, 2018).

Table 2. Regression Result for three models

Variable	Model I	Model II	Model III
Constant	0.550	0.532	0.740
	(1.599)	(0.321)	(.527)
TC	-5.596E-6**	-5.771E-7	-0.088
	(0.000)	(0.000)	(0.072)
Income	2.213E-7	2.119E-8	0.015
	(0.000)	(0.000)	(0.111)
age	-0.030**	-0.004	-0.150
	(0.014)	(0.003)	(0.204)
sex	-0.408	0.053	0.064
	(0.256)	(0.051)	(0.050)
educ	0.050	-0.007	-0.170
	(0.054)	(0.011)	(0.258)
distance	-0.014**	-0.002	-0.196
	(0.007)	(0.001)	(0.075)
Env.awareness	0.703**	0.030	-0.005
	(0.300)	(0.060)	(0.059)
Adj.R^2	0.305	.018	.092
F-stat	7.274***	1.261	2.443**

[a]Dependent variable: number of visits; is the natural logarithm of for the semi-log (Model II) and log-log (Model III). ( ) indicates the standard error. *significant at α= 10%; **significant at α=5%; ***significant at α=1%

One possible explanation may be that the beautiful scenery of the mangrove forest is more attractive to younger visitors. The distance had a negative and significant impact on the number of visits to the mangrove forest at the significant level of 95% for the linear model. The slope of the distance coefficient is negative, indicating that visitors whose home was closer to the mangrove forest visited more frequently than those who live further away. The environmental awareness of visitor had a positive and significant effect on the number

of visits to the mangrove forest at the 95% level for the linear model, indicating that visitors who had a higher awareness of environmental issues visited more than those who did not. Meanwhile, years of schooling, income and gender did not significantly influence the number of visits for the three models.

Table 4 presented the price and income elasticity coefficients for each of the models. The coefficient of elasticity in the linear regression model was evaluated on the average variable. The price elasticity coefficients of the mangrove forest regression model for Model I, Model II and Model III are −0.09, -0.038 and −0.088 respectively, indicating that an inelastic demand means an increase in travel costs of one percent leading to a decrease in the number of visits of less than one percent for all three models. Thus, administrators in mangrove forests must be aware of the inelasticity of demand, because of the lack of responsiveness of the number of visits to price changes. This indicates that ecotourism sites are inherently valuable to people. Most tourists who visit West Lombok will certainly visit the mangrove forest and its neighborhood. The income elasticity in each model is positive, indicating that the mangrove forest as a normal good, meaning that increasing income of visitor will lead to more spending money on mangrove forest. The visitors need IDR 65,600 on average for their travel cost to the mangrove forest.

Table 3. Price and Income Elasticity Coefficient Estimates

Functional form	TC price Elasticity	Income Elasticity
Model I	-0.091	0.084
Model II	-0.038	0.003
Model III	-0.088	0.015

The welfare values for each model have been cited in Table 5. The summary of the formula for estimating the welfare values using travel cost models was provided by Ward and Beal (2000). The estimated individual consumer surplus measures the value that a consumer is willing pay on the average visit to the mangrove forest, given an average access cost of IDR1.269 million; 2.463 million, and 2.711 million for Model I, Model II, and Model III respectively. In theory, equivalent variation welfare and the Hicksian compensating variation is a measure of the right value of benefits, although according to Willig (1976), consumer surplus is an acceptable benefits estimation.

Table 4. Consumer surplus estimates for the mangrove forest (IDR)

Functional Form		
Linear	**Semi-Log**	**Log-Log**
1,269,950	2,462,850	2,711,750

It should be noted that the selection of functional forms is intended for visitors. TCM estimates non-market benefits for individual site users. While for estimating the non-use external benefits regarding the site, stated preference non-market valuation methods should be employed (Ready & Navrud 2002).

B. Contingent Valuation Method (CVM)

The Contingent Valuation Method (CVM) is one of the stated preference methods implemented through surveys and aims to assess people's reactions to any hypothetical change in environmental quality. In particular, this method will identify the number of respondents who are willing to pay to improve environmental quality or to avoid a decrease in the quality of the environment hypothetically (Laplante, 2006). The number of functional specifications suggested by Boyle and Bishop (1988), Bishop, Heberlein, and Kealy (1983), and Hanemann (1984) were estimated by a logit analysis. The best fit with the data in this study was the linear specification (Table 6). These values indicate the estimated coefficients for each independent variable which is regressed on the dependent variable. The probability of saying "yes" indicates that the respondent is willing to pay a specified amount of money to visit the Lembar Mangrove Forest.

Table 5. Regression Result

Variable	Coefficient (SE)	Odd ratio
CONSTANT	-11.071 (4.598)	0.000
INCOME	0.000*** (0.000)	1.000
AGE	-0.112** (0.051)	0.894
SEX	-0.625 (0.852)	0.536
EDUC	0.070 (0.168)	1.072
DISTANCE	-0.041* (0.024)	0.960
ENV.AWARE	2.378*** (0.846)	10.787
Nagelkerke R Square	0.772	

[a]Dependent variable: WTP for mangrove forest conservation. ( ) indicates the standard error. *significant at α= 10%; **significant at α=5%; ***significant at α=1%

About 70% of visitors were willing to pay for mangrove forest conservation of IDR10,500 (USD 0.72) (see Table 2). WTP estimation results for two model specifications of the mangrove forest are given in Table 6.

Sex and education of the tourists did not significantly influence the WTP (see Table 5). Meanwhile, income was significant with a positive sign for both models. This indicates that the higher the tourist's income, the more visits they made to the mangrove forest. Age of visitor had a negative and significant influence on WTP at a level of 5%. The further the distance from visitors' home, the lower the WTP for mangrove conservation. The environmental awareness of visitors positively and significantly influences the WTP at a level of 1%. The higher the environmental awareness, the more his/her WTP for mangrove conservation.

IV. CONCLUSION

Ecotourists who visit the Lembar Mangrove Forest are mostly willing to financially contribute to mangrove forest conservation as much as IDR 10,500 (USD 0.72) per visit. Their willingness to pay is determined by income, age and the distance of the mangrove forest from their home.

Meanwhile, the recreational value of the Lembar Mangrove Forest for a visitor is equal to IDR 1,269,950 (USD 87.58) a year with the average number of yearly visits of four. The number of visits to the mangrove forest is determined by travel cost, age, distance, and environmental awareness. The number of visits is somewhat unresponsive to a change in price.

The method used in this study still has disadvantages. There are large differences between the two methods indicating that one or both are inadequate. TCM is based on real expenditure and actual figures. Meanwhile, CVM may not produce reliable results because open questions may generate responses with large variability. Therefore, for the next study, it is recommended to use a method that can reduce the bias in this study in order to produce more results with more validity.

REFERENCES

[1] Baral N, Stern M J, Bhattarai R. 2008. Contingent valuation of ecotourism in Annapurna conservation area, Nepal, implications for sustainable park finance and local development. Ecological Economics, 66(2-3): 218–227.

[2] Ben-Akiva, M. E., Lerman, S. R., & Lerman, S. R. (1985). *Discrete choice analysis: theory and application to travel demand* (Vol. 9). MIT ess.

[3] Bishop, R. C., Heberlein, T. A., & Kealy, M. J. (1983). Contingent valuation of environmental assets: Comparison with a stimulated market. *Nat. Resources J.*, *23*, 619.

[4] Boyle, K. J., & Bishop, R. C. (1988). Welfare measurements using contingent valuation: a comparison of techniques. *American Journal of ricultural Economics*, *70*(1), 20-28.

[5] Carson, R. T., & Mitchell, R. C. (1993). The value of clean water: the public's willingness to pay for boatable, fishable, and swimmable ality water. *Water resources research*, *29*(7), 2445-2454.

[6] Feenberg D., & Mills, E. S. (1980). Empirical studies of instream benefits. *Measuring the Benefits of Water Pollution Abatement*, 105-

[7] Giri, C., Zhu, Z., Tieszen, L. L., Singh, A., Gillette, S., & Kelmelis, J. A. (2008). Mangrove forest distributions and dynamics (1975–2005) of the tsunami-affected region of Asia. *Journal of Biogeography*, *35*(3), 519-528.

[8] Gujarati, D. N. (2009). *Basic econometrics*. Tata McGraw-Hill cation.

[9] Hanemann, W. M. (1984). Welfare evaluations in contingent valuation experiments with discrete responses. *American journal of agricultural nomics*, *66*(3), 332-341.

[10] Hof, J. G., & Rosenthal, D. H. (1987). Valuing the opportunity cost of travel time in recreation demand models: an application to aggregate a. *Journal of Leisure Research*, *19*(3), 174-188.

[11] Kling, C. L., (1986). Measuring the Recreational Benefits of Environmental Amenities Using Multiple Site Models: An Evaluation of Techniques. University of Maryland, College Park, MD., Ph.D. Dissertation.

[12] Laplante, B. (2006). Review of Implementation of Decree 67/2003 on Environmental Protection Charges for Waste Water in Viet Nam. *Draft report submitted to the United Nations Development Program on May* 006.

[13] Liston-Heyes, C., & Heyes, A. (1999). Recreational benefits from the Dartmoor national park. *Journal of Environmental agement*, *55*(2), 69-80.

[14] Navrud, S., & Ready, R. C. (Eds.). (2002). *Valuing cultural heritage: Applying environmental valuation techniques to historic buildings, monuments, and artifacts*. Edward Elgar Publishing.

[15] Sathirathai, S., & Barbier, E. B. (2001). Valuing mangrove conservation in southern Thailand. *Contemporary Economic licy*, *19*(2), 109-122.

[16] Smith, V. K. (1989). Taking stock of progress with travel cost recreation demand methods: Theory and implementation. *Marine urce economics*, *6*(4), 279-310.

[17] Ward, F. A., & Beal, D. (2000). Valuing nature with travel cost dels. *Books*.

[18] Willig, R. D. (1976). Consumer's surplus without apology.

[19] Rosilawati, Y. (2014). Employee Branding Sebagai Strategi Komunikasi Organisasi Untuk Mengkomunikasikan Citra Merek (Brand-image). *Jurnal Ilmu Komunikasi*, *6*(3).

[20] Nikku, B. R., & Rafique, Z. (2019). Empowering people: Role for political social work in South Asia. *International Social Work*, *62*(2), 877-891.

[21] Rosilawati, Y., Rafique, Z., Nikku, B. R., & Habib, S. (2018). Civil society organizations and participatory local governance in Pakistan: An exploratory study. *Asian Social Work and Policy Review*, *12*(3), 158-168.

Recreational Value of Mangrove Forest and Tourist Willingness to Pay for Mangrove Conservation

ORIGINALITY REPORT

14%	%	14%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Endah Saptutyningsih, Diswandi Diswandi. "Application of choice modelling on mangrove forest valuation in West Lombok, Indonesia", IOP Conference Series: Earth and Environmental Science, 2019 Publication	3%
2	Christos Siderelis. "Incidental Trips and Aquarium Benefits", Leisure Sciences, 7/1/2001 Publication	1%
3	"A Primer on Nonmarket Valuation", Springer Science and Business Media LLC, 2017 Publication	1%
4	Cameron, Trudy Ann, and Daniel D. Huppert. "Referendum Contingent Valuation Estimates: Sensitivity to the Assignment of Offered Values", Journal of the American Statistical Association, 1991. Publication	1%
5	Wendy Y. Chen, C.Y. Jim. "Resident valuation	1%

and expectation of the urban greening project in Zhuhai, China", Journal of Environmental Planning and Management, 2011
Publication

---

6 Maria Adelaide Ferreira, Francisco Andrade, Ricardo Nogueira Mendes, José Paula. "Use of satellite remote sensing for coastal conservation in the Eastern African Coast: advantages and shortcomings", European Journal of Remote Sensing, 2017 — 1%
Publication

---

7 Nabin Baral, Marc J. Stern, A. L. Hammett. "Developing a scale for evaluating ecotourism by visitors: a study in the Annapurna Conservation Area, Nepal", Journal of Sustainable Tourism, 2012 — 1%
Publication

---

8 University of Tennessee, Knoxville — 1%
Publication

---

9 N. E. BOCKSTAEL, K. E. McCONNELL, I. E. STRAND. "A Random Utility Model for Sportfishing: Some Preliminary Results for Florida", Marine Resource Economics, 1989 — 1%
Publication

---

10 Eva Pérez-Hernández, Carolina Peña-Alonso, Luis Hernández-Calvento. "Assessing lost cultural heritage. A case study of the eastern — 1%

coast of Las Palmas de Gran Canaria city (Spain)", Land Use Policy, 2020
Publication

11	Anna Toner, Tom Franks. "Putting livelihoods thinking into practice: implications for development management", Public Administration and Development, 2006 Publication	1%
12	John Mackenzie. "Evaluating Recreation Trip Attributes and Travel Time Via Conjoint Analysis", Journal of Leisure Research, 2018 Publication	1%
13	CHI-OK OH, ROBERT B. DITTON, DAVID K. ANDERSON, DAVID SCOTT, JOHN R. STOLL. "Understanding Differences in Nonmarket Valuation by Angler Specialization Level", Leisure Sciences, 2005 Publication	1%
14	"Complex, Intelligent, and Software Intensive Systems", Springer Science and Business Media LLC, 2020 Publication	1%
15	Sheng-rong Qiu, Shui-sheng Fan. "Recreational value estimation of suburban leisure agriculture: a case study of the Qianjiangyue agritourism farm", Journal of Mountain Science, 2016 Publication	1%

16 D. Cella, C. Ivanescu, S. Holmstrom, C.N. Bui, J. Spalding, K. Fizazi. "Impact of enzalutamide on quality of life in men with metastatic castration-resistant prostate cancer after chemotherapy: additional analyses from the AFFIRM randomized clinical trial", Annals of Oncology, 2015

Publication

1%

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	Off		