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چکیده

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Archive of SID

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(۹).

(Meineke, 1928)

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(Stankey and McCool, 1984; Payne and
(Graham ,1993; Nilsen, and Tayler, 1997)

Bury, 1976;Brown, 1977; Ream, 1980;Cole and)
(Schreiner,1981;Washburn, 1982;

GIS

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(Clark and Stankey, 1979; Manning , 1999; Manning et.al.
1996; McCool and Cole D. 1997; Nilsen, and Tayler,
1997; Payne and Graham ,1993; Stankey et.al. 1985).

ROS

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(۱۶)

(LAC)

(Achuff and White, 1986)

119° 30' W 115° 20' W 53° 30' N 50° 40' N

McCool and)

.Cole ,1997; Nilsen, and Tayler, 1997)

(EHUCS)

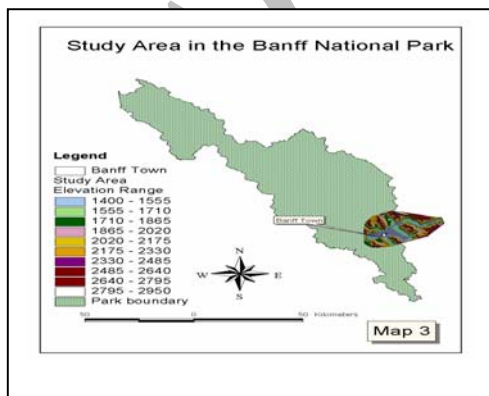


(RCC)

ROS LAC

Clark and Stankey,1979;)

Buist and Hoots,1982; Stankey and McCool, 1984;
(Jubenville,A.1976

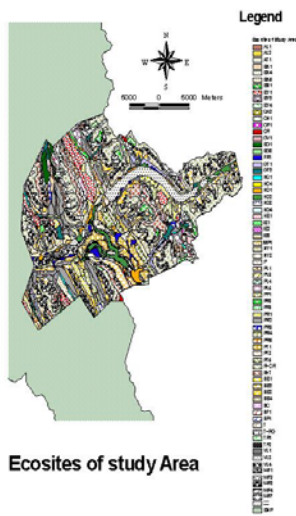


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(Banff, 1998) (Geosyncline

(C.S.S.C, 1978a)



Ecosites of study Area

(10)

(Ecoregion)

(11)

(Ecosections)

(Ecosites)

(C.S.S.C,1978a)

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Cordilleran)

(Banff, 1990)

EHUCS

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(Natural Areas of Significance)

(Jubenville, 1976)

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(Stankey and McCool,1990; Nilsen and Tayler,1997)

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EHUCS

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EHUCS

ArcView

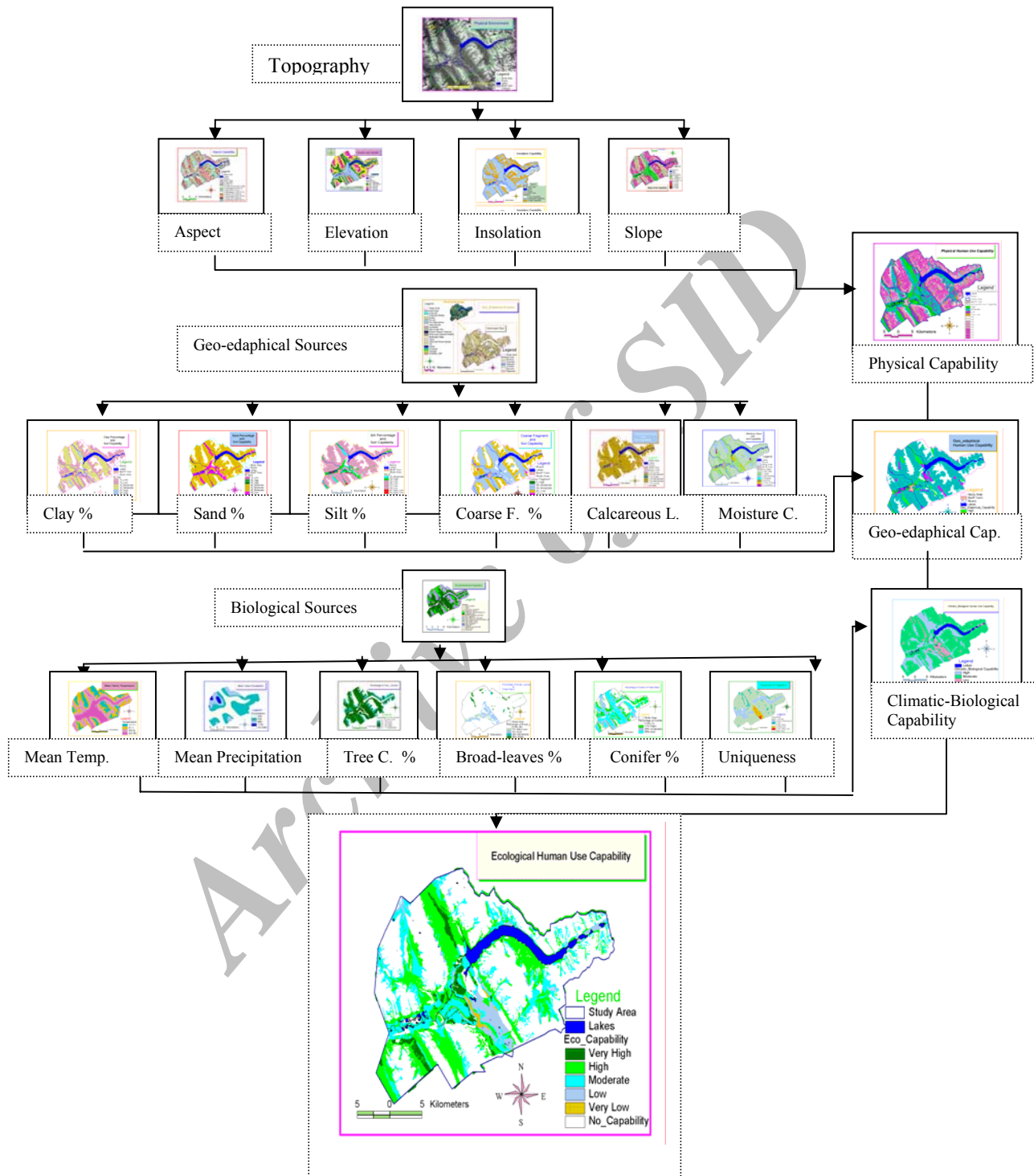
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(m)	۱۳۳۳-۱۶۰۶	۱۶۰۶-۱۸۸۰	۱۸۸۰-۲۱۵۴	>۲۱۵۴	
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(w /m ²)	۱۰۱۸۹۶-۶۴۴۳۴۶	۶۴۴۳۴۶-۱۱۸۶۷۹۶	۱۱۸۶۷۹۶-۱۷۲۹۲۴۷		
	۱	۲	۳		
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EHUCS

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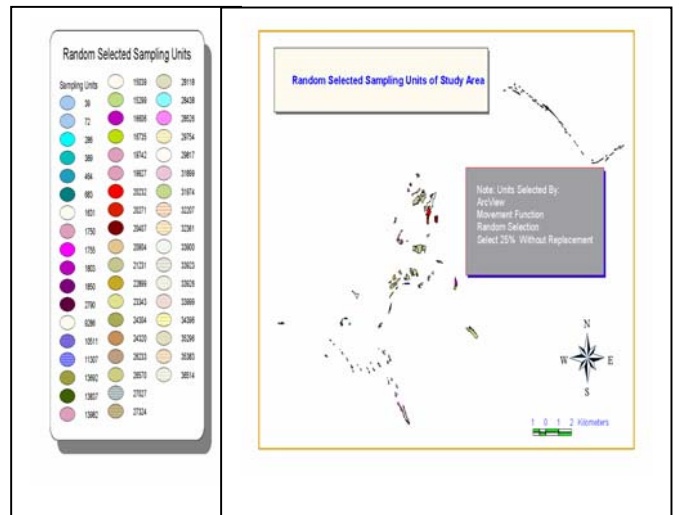
ArcView

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(۱۹) DXF

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$$f(m, n - m - 1) = \frac{SS_{reg} / (m)}{SS_{res} / (n - m - 1)}$$

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(25) (26) (27) (28) F (29)

مناسب برای ایجاد مدل طیف قابلیت‌های

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(Cohen, 1975)

(β_i ($\beta_{y \cdot 123 \dots 20}$)) (28)

Model $GCI = f(\text{geo-edaphic-climatic-biological-physical})$
 $Y = f(x_1, x_2, x_3, \dots, x_{20}), \mu_{Y/x_1, x_2, \dots, x_{20}} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{20} x_{20}$
 Parameter $Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{20} x_{20} + \varepsilon_i$
 Sample $Y_i = b_0 + b_1 x_1 + b_2 x_2 + \dots + b_{20} x_{20} + e_i$
 Predicted $\hat{Y} = b_0 + b_1 x_1 + b_2 x_2 + \dots + b_{20} x_{20}$

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$$H_0 : \sigma^2_{reg} / \sigma^2_{res} = 1$$

$$H_1 : \sigma^2_{reg} / \sigma^2_{res} > 1$$

Or equivalently

$$H_0 : \beta_1 = \beta_2 = \beta_3 \dots \beta_{20} = 0$$

$$H_1 : \text{At least one of partial regression coefficient} \neq 0$$

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SPSS

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(۳۹) SPSS

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log) () ()

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(ELC)

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SPSS

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حفاظتی در جنگلهای هیرکانی تلقی شود.

ELC

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Model		Standardized Coefficients
5	(Constant)	
	X1	.452
	X2	.365
	X3	-.254
	X4	.222
	X7	-.191
	X8	.229
	X10	-.170

a Dependent Variable: Y

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ELC

Stratigraphic Framework

(Structural Framework)

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EHUCS

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Buxus			SL1
Zelkova_Buxus			SL2
Carpinus-Buxus			SL3
Gleditchia			SL4
Alnus-Pterocarya			SL5

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-	EutrickBrunisols	:	TS
			TS1

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2-The Outdoor Recreation Resource Review Commission Reports

3-The Recreation Opportunity Spectrum (ROS)- U.S. Forest Service,1960

4-The Limits of Acceptable Change (LAC)- U.S. Forest Service,1985

5-The Visitor Impact Management - U.S. National Park Service,1984

6-The Visitor Activity Management Process- Canadian Park Services,1970

7-The Visitor Experience Resource Protection - U.S. National Park Service,1972

8-The Ecological Human Use Capability Spectrum (EHUCS) Classes

LAC ROS

Data resolution: 1:50,000, Reference system: The North American Datum 1983, DEM (Digital Elevation Model), Data resolution: 1:50,000, Reference system: The North American Datum 1927, ELC (Ecological Land Classification), Ecological Land Classification of Banff and Jasper National Parks, Volumes I, II, III (Holland and Coen 1982), Banff National Parks Management Plan, Ecosystem Secretariats and Warden Services Field Reports, Beta Version Software BNP Human Use Data Base (2001)
Price et al., 1979; Mountjoy, 1980; Holland and Coen, 1982; BNP East Gate-Castle Biophysical Study 1989 and Parks Canada Ecosystem Secretariats Reports

19-Drawing Exchange Format

20-Canada National Topographic Database

21-Beta Version Software BNP Human Use Database (2001)

22- Backwards Elimination Procedure

23- Partial F Value

24- goodness of regression

25- Multiple Coefficient of Determination

26- Multiple Correlation coefficient

27- Standard Error of the Estimate

28- partial regression coefficient

29- Statistical Package for the Social Science

30-(Backward Elimination , Forward Selection and Stepwise regression)

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9-Human Use Value (HUV) or Human Disturbance Value (HDV) and or Human Use Level (HUL): Refers to level of human presence (wide range of activities) in the protected areas. Log values of human use distribution people/per month (will be presented as polygons) will represent HUL

10-As "Ecoregions" in Alberta and the national parks (Holland and Coen 1982, Achuff et al., 1984; Strong, 1992) and as "Biogeoclimatic Zones" in British Columbia (Meidinger and Pojar, 1991; Braumandl and Curran 1992).

11-Miscellaneous landscapes are applied to individual tracts, which are not part of the ecoregion concept (e.g.rock, water, etc.)

12-e.g. closed vs. open forests

13-e.g. lodge pole pine forest, engelmann spruce-sub alpine fir forest

14-e.g. eutric group of brunisolic order

15-Species with the highest percent of cover

16-Standard Definition of Ground Cover Index (GCI): The portion of the site (expressed as a %) which is not surfaced or reinforced, and which is covered by ideal natural ground-level vegetation, litter, moss or rock.

17-Eco-units

18-Data Collection Resources:

Primary data (new data) capture : Field survey / sampling plots, Digitizing from Orthophotograph: UTM, Zone 11U, The North American Datum 1983, Conversion of Paper Map 1:10,000(2001), Lower Bow Valley BNP (East Gate- Castle Junction) Biophysical Map, 1:50,000 (1989), Land -Use Zoning BNP Map, Town of Banff and Surrounding Area Map, etc.

Secondary data importing: Canada National Topographic Data Base: Data resolution: 1:50,000, Reference system: The North American Datum 1983, Data format: DXF (Drawing Exchange Format), Parks Canada GIS Data Base:

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Achuff, L. P. and White, C. 1986. Special resources of Banff National Park. Warden Service. BNP. Banff.

36- Ecoregion

37- Climatic Units

Banff National Park. 1990. Back country management plan. 1998. BNP management plan, Banff BNP.

(CSSC 1978b)

Brown, J. 1977. Effects of recreational use on forest sites. Environmental Geology. 1:425-431.

Buist, L.J. and Hoots, T.A. 1982. The recreation opportunity approach to resource planning. Forestry. 80:84-86.

40- Lithology

41- Material Unsorted Genetic

Bury, R.L. 1976. Recreation Carrying Capacity. Parks and Recreation 11(1):22-25, 56-57.

42- Genetic Material

43- Surface Expression

C.S.S.C. Canada Soil Survey Committee. 1978a. The Canada Soil Information System: manual for describing soils in the field. Agr. Can. Ottawa. 92pp.

44- Modifying Processes

45- Genetic Material Units

Clark R.N. and Stankey G.H. 1979. The Recreation Opportunity Spectrum: A framework for planning, management, and research. USDA F S General Technical Report PNW-98

46- Ecological Land Classification

Cohen J. 1975. Applied Multiple Regression Correlation Analysis for the Behavioral Sciences. New York University.

()

USDA Forest Service General Technical Report INT-81. 62 pp

Stankey, G.H., and S.F. McCool.1984. Carrying capacity in recreational settings: Evolution, appraisal, and application. *Leisure Science* 6(4):453-474.

Stankey, G.H., and S.F. McCool.1990. Managing for appropriate wilderness conditions: The carrying capacity issue. CO: Fulerum Press: 215-239

Stankey, G.H. D.N. Cole, R.C. Lucas, M.E. Petersen, and S.S. Frissell .1985. The limits of acceptable change (LAC) system for wilderness planning. Ogden Utah Gen. Tech. Rep. Int - 176. USDA FS.

Toth, R. 1971. Criteria in land planning and design. *Landscape Architecture* 62(1):43-46. USDA Forest Service.

Wager, J.A. 1974. Recreation carrying capacity reconsidered. *Journal of Forestry* 72(3):274-278.

Washburn, R.F. 1982. Wilderness recreational carrying capacity: Are numbers necessary? *Forestry* .80:726-728.

Cole, D.N. and Schreiner .1981. Impact of back country recreation: Site management and rehabilitation

Jubenville, A.1976. Outdoor recreation planning. Philadelphia. W.B. Saunders Company

Manning, R.E. 1999. Studies in outdoor recreation: Search and research for satisfaction. Corvallis. Oregon State University Press.

Manning, .et.al 1996. Social carrying capacity of natural areas: Theory and application in the US National Parks. *Natural Areas Journal*. 16(2)

McCool, S. and Cole,D. 1997. Experiencing limits of acceptable change: Some thoughts after a decade of implementation. Gen. Tech. Rep. INT-GTR-371.

Meinecke, E.1928. A report upon the effects of excessive tourist travel on the California Redwood Parks. California State Printing Office.

Nilsen, P. and G. Tayler .1997. A comparative analysis of protected area planning and management frameworks. Gen. Tech. Rep. INT-GTR-371

Payne, R.J. and Graham. R. 1993. Visitor planning and management in parks and protected areas. In P. Dearden and Rollins (Eds), parks and protected areas in Canada: Planning and management. Oxford University Press.

Ream, C.H. 1980. Impacts of backcountry recreationist on wildlife: An Annotated Bibliography.