

574 + 911

... , 41, 79000, ... ,  
*e-mail: a.smaliychuk@gmail.com*

1980-

[5, 6].

( ) ( 1980- ) ;

[13, 14, 18].

[7, 9, 10, 12].

[23].

[17].

[1],

( )

[2, 4],

[25] [24]

[16], [25]

[8], [3], [8].

[8].

“

( 2 513,2 )

( 3 185,1 )

( 2 061,4 ) ( 4 313,5 ) ( 6 797,2 )

( . . .1).

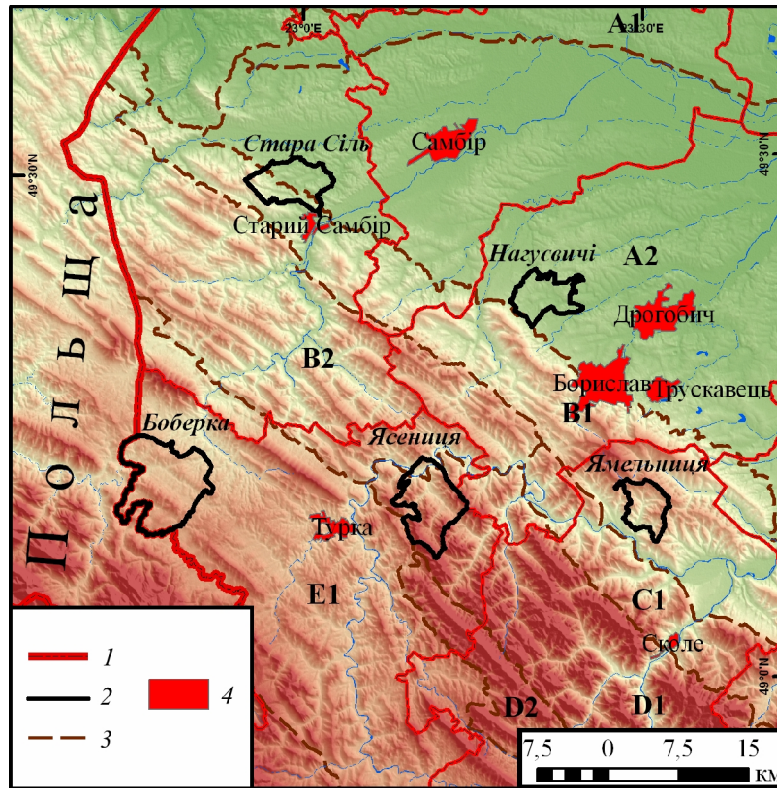
( ), [16, 17].

– ArcGIS 9.2 [11].

[20],

[21].

[26].



.1.

[7, 23].

: A1 – ; A2 – ; B1 – ; B2 – ; C1 – ; D1 – ; D2 – ; E1 – ; 1 – ; 2 – ; 3 – ; 4 –

( ),  
 ( . .1).

( ) ( ) . ( )  
 100 ( )  
 “ ”).

( ) -  
(+) (-) -

1

			-	
			-	
	0-350	1	+	
	351-500	2		
	501-650	3		
	651-950	4		
	951-1 250	5		
	0-3,0	1	+	
	3,1-6,0	2		
	6,1-12,0	3		
	12,1-20,0	4		
	> 20,0	5		
	0-45, 316-359	1	+/-	
	46-135, 226-315	2		
	136-225	3		
		1	+/-	
		2		
		3		
		4		
		1	+	200
		0		
	0-500	1	+	
	501-1 000	2		
	1 001-1 500	3		
	1 501-2 000	4		
	> 2 000	5		
	0-1 500	1	+	
	1 501-3 000	2		
	3 001-4 500	3		
	4 501-6 000	4		
	> 6 000	5		
		1	+/-	
		0		

$$= \frac{1}{1 + e^{-z}}, \tag{1}$$

$$z = b_0 + b_1x_1 + b_2x_2 + \dots + b_8x_8, \tag{2}$$

$b_0 -$  ;  $b_1 - b_8 -$  ,  $b_0 = 0$ .

[0; 1]. "0" "1"

[15].

[15],

4 000

( 2 000)

(1976–1989)

2 542

IBM SPSS Statistics 20.0

(2).

[19].

$(b_1 - b_8)$ ,

( . . . 2).



(рис. 3).

3

	0,43	0,82
	0,42	0,81
	0,58	0,70
	0,58	0,79
	0,57	0,86

(рис. 2).

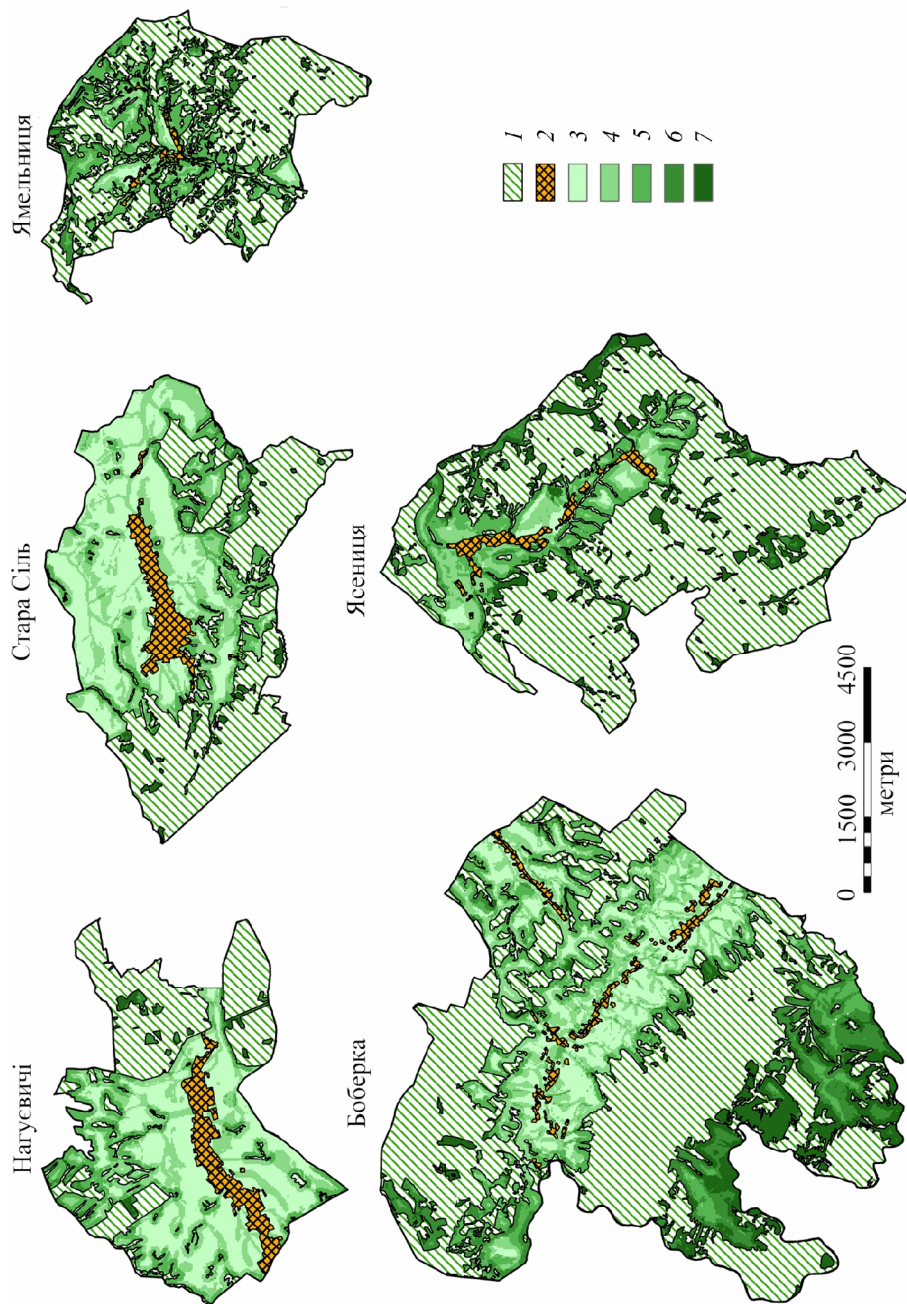
(рис. 4).

70 80 %

4

	(0,21–0,37)	(0,37–0,52)	(0,52–0,68)	(0,68–0,83)	(0,83–0,99)
	42,7	28,8	21,0	4,8	2,7
	42,6	31,2	19,6	3,8	2,8
	4,3	15,6	51,7	17,9	10,5
	19,9	22,2	22,9	17,1	17,9
	5,3	19,9	28,8	14,0	32,0

(рис. 5).



.2.  
: 1 - ; 2 -  
3 - 0,21-0,37; 4 - 0,37-0,52; 5 - 0,52-0,68; 6 - 0,68-0,83; 7 - 0,83-0,99



				%
	919	352	1271	72,3
	275	996	1271	78,4
	1194	1348		75,3

200

(0,68–0,83) (0,83–0,99) 46 %

27–35 %

10 % –

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24.01.2014  
25.04.2014  
25.06.2014

### **MODELLING OF A FOREST SUCCESSION DEVELOPMENT IN LOCAL GEOECOSYSTEMS OF UKRAINIAN CARPATHIANS**

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The paper showed an algorithm and a result of analysis of recent geoecosystem dynamic's drivers, which reveals in its land cover changes. Five model municipalities were selected for this study in the foothill, low and middle mountain within Lviv region. The statistical analysis was performed using mathematical model of logistic regression. It was found out that geoecosystems' changes is more connected with natural, than anthropogenic, drivers of land use. The logistic regression coefficients, calculated during statistical analysis, were used for spatial modelling of forest succession probability in geoecosystems in future.

*Key words:* Ukrainian Carpathians, geoecosystems, land cover, forest succession, statistical analysis, logistic regression, GIS.