

ANALYSIS OF TOURIST DEMAND IN THE ECOTOURIST DESTINATION OF DORNA LAND, SUCEAVA COUNTY

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Abstract

The dynamics of arrivals, overnight stays and analysis of the average length of stay in the localities that make up the ecotourism destination Dorna Land in Suceava County (Vatra Dornei, Poiana Stampei, Coșna, Dorna Candrenilor, Dorna Arini, Șaru Dornei, Panaci, Cărlibaba, Ciocănești and Iacobenii), shows that, in the analyzed period (2019-2023), arrivals recorded relative increases that varied between 0.53% and 28.68%, with the exception of Vatra Dornei Municipality where a relative decrease in arrivals of 3.96% was recorded; regarding overnight stays, relative increases were recorded in the localities of Ciocănești, Dorna Arini, Iacobenii, Poiana Stampei and Șaru Dornei, values that varied between 4.13% and 25.74%, in the remaining localities, relative decreases were recorded that varied between 0.11% and 5.86%. The average length of stay during the analyzed period recorded values that varied between 1 day (Iacobenii, year 2019) and 3.86 days (Vatra Dornei, year 2019).

Key words: arrivals, overnight stays, average length of stay, absolute dynamics, relative dynamics

INTRODUCTION

Ecotourism offers opportunities for nature-based experiences that lead to a better understanding, appreciation, and a way to discover and protect local nature and traditional culture, both for visitors and the local community. Ecotourism products attract tourists who wish to interact with the natural environment and, to varying degrees, seek to expand their level of knowledge, understanding, and appreciation. Those who develop or coordinate ecotourism activities must provide an appropriate level of understanding of the natural and cultural values of the visited areas, usually through the use of properly qualified guides and the provision of accurate information both before and during the experience. The level and type of interpretation are planned, designed, and delivered to meet the interests, needs, and expectations of the tourist [1–9].

The ecotourism destination Dorna Land in Suceava County consists of 10 localities:

Vatra Dornei, Poiana Stampei, Coșna, Dorna Candrenilor, Dorna Arini, Șaru Dornei, Panaci, Cărlibaba, Ciocănești, and Iacobenii. Dorna Land was designated as an ecotourism destination for the first time in 2019 and was re-evaluated and reconfirmed as an ecotourism destination in 2023, a status valid until 2026 (the ecotourism destination status is granted for a maximum period of three years, with the possibility of subsequent extension, by the General Directorate for Tourism in Romania) [10].

The benefits of a certified destination are numerous, as clear directions for local tourism development are established, laying the foundation for local partnerships between local authorities, the private sector, the administrator of the protected natural area, and NGOs active locally. This, in turn, leads to the implementation of a destination management structure through a Destination Management Organization (DMO), either newly established or already existing at the

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county level. Additionally, certified destinations can benefit from dedicated funding and promotion opportunities that will increase the destination's visibility nationally and internationally [10]. In Dorna Land, there are over 150 kilometers of mountain biking trails with varying difficulty levels, from easy routes through picturesque villages to technical trails across the Suhard, Giurnalău, Călimani, and Bistriței massifs. There is also a network of over 400 kilometers of marked mountain trails, making it an ideal destination for hiking, guided by local guides or hosts. Dorna Land offers opportunities for equestrian tourism, ranging from beginner lessons and easy rides to itinerant trail excursions, as well as easy nature hikes on thematic paths, boating experiences, and visits to villages, museums, and the Calimani National Park Visitor Center [11].

The natural and traditional cultural values of Dorna Land are promoted by the Dorna Land Ecotourism Association (AETD), which was founded to support those who contribute through their activities to the development of quality tourism and to provide visitors with an authentic experience [11].

The general objective of AETD is to support balanced and sustainable development in the Dorna Land area through responsible and conscious tourism, tourism that contributes to the economic development of the area by integrating local resources, and tourism that offers visitors an authentic experience focused on nature and the local civilization typical of the mountainous Dorna Land region [11].

By studying the dynamics of arrivals, overnight stays, and the analysis of average length of stay in the 10 localities (Vatra Dornei, Poiana Stampei, Coșna, Dorna Candrenilor, Dorna Arini, Șaru Dornei, Panaci, Cărlibaba, Ciocănești, Iacobeni) that make up Dorna Land, one addresses a

fundamental need of tourism, namely the definition of the tourism phenomenon. Tourism circulation, along with tourism potential and infrastructure, is one of the components that help define the tourism phenomenon and best reflect how and to what extent the tourism potential of an area is being utilized [12].

MATERIAL AND METHOD

The number of accommodated tourists (arrivals) in tourist accommodation units includes all persons (both Romanian and foreign) who travel outside the localities where they have permanent residence, for a period of less than 12 months, and stay at least one night in a tourist accommodation unit in the visited areas of the country. The main purpose of the trip must be other than carrying out paid activities in the places visited [13]. A tourist overnight stay is defined as a 24-hour interval, starting from the hotel check-in time, during which a person is registered in the records of the tourist accommodation and benefits from lodging charged according to the rate for the occupied space, even if the actual duration of stay is shorter than the specified interval. Overnight stays associated with extra beds (paid by clients) are also included [13].

The average length of stay is determined by the ratio between the number of days per tourist (NTZ) and the number of tourists (T) and reflects the ability of the tourist offer to retain the visitor in a certain area, region, or country [14,15].

$$D_s = \frac{\sum NZT}{\sum NT}$$

where: D_s - mean duration of sojourn;
 NZT - numbers of days/tourist;
 T - tourists number.

Figure 1 shows a schematic and visual representation of the research organization scheme on which this scientific paper was based.

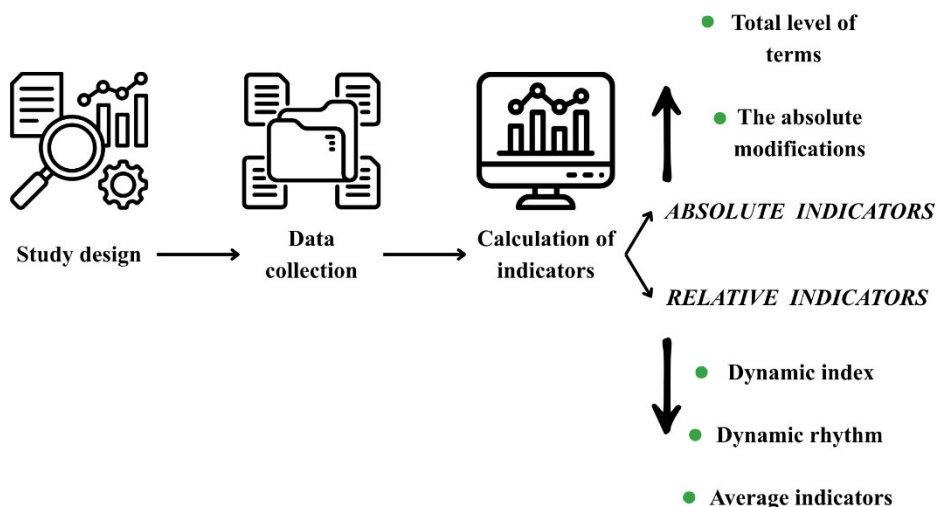


Figure 1 Research organization chart

Absolute indicators represent a basic form of dynamic series, based on which could be obtained general indicators.

Level indicators are the terms of a series formed by absolute indicators ($y \dots y_t \dots y_{t-1}$).

Total level of terms ($\sum_{t=1}^n y_t$), only for time interval series with absolute measures.

The absolute modifications: with fixed base $\Delta_{t/1} = y_t - y_1$ where, $t = \overline{2, n}$; with in chain base (mobile or variable base) $\Delta_{t/t-1} = y_t - y_{t-1}$ where, $t = \overline{2, n}$.

Relative indicators

It is a presentation way, mainly percentage. In this situation is mandatory that in title or outside the table to be mentioned the rating based so the data interpretation to be correctly done.

Dynamic index: with fixed base $I_{t/1}(\%) = \frac{y_t}{y_1} \times 100$; with in chain base $I_{t/t-1}(\%) = \frac{y_t}{y_{t-1}} \times 100$.

Dynamic rhythm: with fixed base $R_{t/1} = I_{t/1}(\%) - 100\%$; with in chain base $R_{t/t-1} = I_{t/t-1}(\%) - 100\%$, $t = \overline{2, n}$.

Average indicators: \bar{y} – the average level of the interval time series $\bar{y} = \frac{\sum_{t=1}^n y_t}{n}$,

$\bar{\Delta}$ – the average level of the absolute change (increase or decrease) $\bar{\Delta} = \frac{y_n - y_1}{n-1}$, \bar{I} – the

average index of dynamics $\bar{I} = \sqrt[n-1]{\frac{y_n}{y_1}}$,

\bar{R} – the average growth rate $\bar{R} = \bar{I} - 100$.

RESULTS

Using statistical data provided by the National Institute of Statistics [13] regarding tourist circulation in the localities that make up the ecotourism destination Dorna Land in Suceava County (Vatra Dornei, Poiana Stampei, Coșna, Dorna Candrenilor, Dorna Arini, Șaru Dornei, Panaci, Cârlibaba, Ciocânești, and Iacobenii), we analyzed the level and dynamics of the following indicators: total arrivals, total overnight stays, and average length of stay. These indicators were analyzed over a period of 5 years (2019–2023), both in terms of dynamics and structure.

Figure 2 visually represents the geographical location of the Dorna Area in Suceava County.

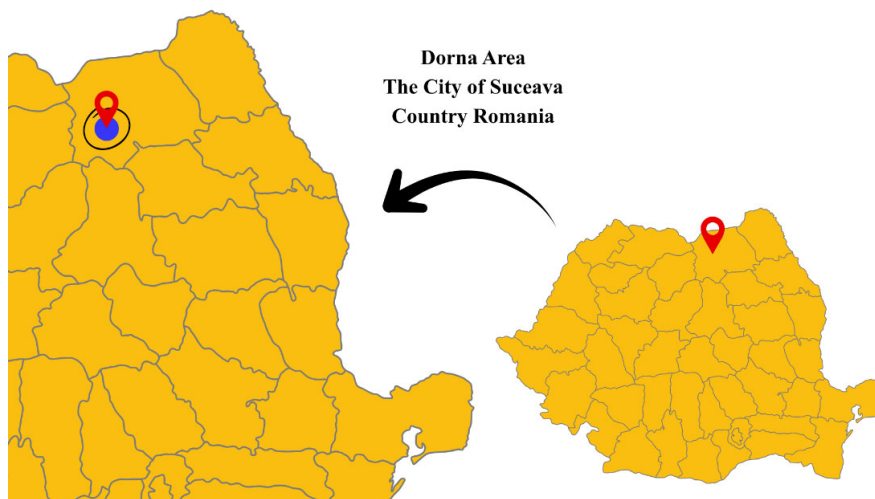


Figure 2 Geographical location of the Dorna Area in Suceava County

Table 1 presents the number of tourist accommodation structures with lodging functions in the 10 localities that make up the ecotourism destination Dorna Land (Suceava County). Tables 2–11 analyze the level and dynamics of arrivals in the 10 localities that compose the ecotourism destination Dorna Land (Suceava County), using both fixed-base and chain-base indices as well as average indicators. Tables 12–21 analyze the level and dynamics of overnight stays in the 10 localities that compose the ecotourism destination Dorna Land (Suceava County), using both fixed-base and chain-base indices as well as average indicators. The average length of

stay in the 10 localities that make up the ecotourism destination Dorna Land, as an indicator showing the average time (in days) tourists remain in accommodation units, is presented in Table 22.

DISCUSSIONS

Tourist reception structures

The number of tourist accommodation structures (hotels, apartments and rental rooms, agro-tourism guesthouses, tourist guesthouses, and tourist cottages) in the 10 localities that make up the ecotourism destination Dorna Land varied during the analyzed period (2019–2023) between 131 and 233 (Table 1).

Table 1 Number of tourist reception structures in Dorna Land in the period 2019-2023

Places	2019	2020	2021	2022	2023
Vatra Dornei	63	66	98	108	104
Cârlibaba	2	1	1	1	1
Ciocănești	8	8	11	11	11
Coșna	3	3	3	4	4
Dorna Candreni	8	12	16	16	18
Dorna Arini	22	22	32	35	44
Iacobeni	1	1	1	1	2
Panaci	6	6	11	12	12
Poiana Stampei	2	3	4	3	4
Șaru Dornei	16	18	25	27	33
Total	131	140	202	218	233

Source: *insse.ro*

The largest number of structures is found in the localities of Vatra Dornei, Dorna Arini, and Șaru Dornei. The total number of tourist accommodation structures increased by 77.86% by the end of the analyzed period compared to the base year.

Arrivals and Overnights

Arrivals

By analyzing the absolute and relative dynamics of arrivals in the locality of Vatra Dornei during the period 2019–2023, it was

found that in 2023 the number of arrivals decreased by 14.89% compared to the base year (2019) (Table 2). The most significant decrease in arrivals compared to the base year occurred in 2020 (pandemic year), with a 39.6% drop. Compared to the previous year, a significant increase in arrivals was recorded in 2021, with a growth of 29.55%.

Overall, the average level of arrivals was 58,175.8 persons, with an average absolute decrease of 2,655.75 persons and a relative decrease of 3.96%.

Table 2 Absolute and relative changes in arrivals from Vatra Dornei Municipality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	71,374	-	-	-	-	-	-
2020	43,112	-28,262	-28,262	60.40	60.40	-39.6	-39.6
2021	55,852	-15,522	12,740	78.25	129.55	-21.75	29.55
2022	59,790	-11,584	3,938	83.77	107.05	-16.23	7.05
2023	60,751	-10,623	961	85.11	101.60	-14.89	1.60
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	58,175.8	-2,655.75		0.9604 (96.04%)		-3.96	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Cârlibaba during the period 2019–2023, it was found that in 2023 there was an increase of 22.08% in the number of arrivals compared to the base year (2019) (table 3). The most significant increase in the number of arrivals compared to the base year was recorded in 2021, with

32.99%. Compared to the previous year, the most important increase in the number of arrivals was also recorded in 2021, with 34.39%.

Overall, the average level of arrivals was 3,254.2 persons, with an average absolute increase of 153.75 persons and a relative increase of 5.11%.

Table 3 Absolute and relative changes in arrivals from Cârlibaba Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	2,785	-	-	-	-	-	-
2020	2,756	-29	-29	98.94	98.94	-1.05	-1.05
2021	3,704	919	948	132.99	134.39	32.99	34.39
2022	3,626	841	-78	130.19	97.89	30.19	-2.11
2023	3,400	615	-226	122.08	93.76	22.08	-6.24
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	3,254.2	153.75		1,0511 (105.11%)		5.11	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Ciocănești during the period 2019–2023, it was found that in 2023 there was an increase of 12.76% in the number of arrivals compared to the base year (2019) (table 4). The most significant increase in the number of arrivals compared to the base year was recorded in 2022, with 145.87%, while the most significant decrease

was observed in 2020, with 33.79%. Compared to the previous year, the most significant increase in the number of arrivals was recorded in 2021, with 103.96%.

Overall, the average level of arrivals was 2,511.6 persons, with an average absolute increase of 60.79 persons and a relative increase of 3.04%.

Table 4 Absolute and relative changes in arrivals from Ciocănești Locality in the period 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	1,903	-	-	-	-	-	-
2020	1,260	-643	-643	66.21	66.21	-33.79	-33.79
2021	2,570	667	1,310	135.04	203.96	35.04	103.96
2022	4,679	2,776	2,109	245.87	182.06	145.87	82.06
2023	2,146	243	2,533	112.76	45.86	12.76	-54.14
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	2,511.6	60.75		1,0304 (103.04%)		3.04	

Source: *insse.ro*

Analyzing the absolute and relative dynamics of arrivals in Coșna during the period 2019–2023, it was found that in 2023 there was an increase of only 2.14% in the number of arrivals compared to the base year (2019) (table 5). During the rest of the period, decreases were recorded, the most significant decrease in the number of arrivals compared to the base year being in

2022, with 60.45%. Compared to the previous year, a significant increase in the number of arrivals was recorded in 2023, with 158.24%.

Overall, the average level of arrivals was 829.2 persons, with an average absolute increase of 6.5 persons and a relative increase of 0.53%.

Table 5 Absolute and relative changes in arrivals from Coșna Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	1,211	-	-	-	-	-	-
2020	518	-693	-693	42.77	42.77	-57.23	-57.23
2021	701	-510	183	57.88	135.32	-42.12	35.32
2022	479	-732	-222	39.55	68.33	-60.45	-31.67
2023	1,237	26	758	102.14	258.24	2.14	158.24
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	829.2	6.5		1,0053 (100.53%)		0.53	

Source: *insse.ro*

Analyzing the absolute and relative dynamics of arrivals in Dorna Candrenilor during the period 2019–2023, it was found that in 2023 there was an increase of 2.97% in the number of arrivals compared to the base year (2019) (table 6). However, a significant decrease was recorded in 2020 (the pandemic year), with 54.22%.

Compared to the previous year, the most significant increase in the number of arrivals was recorded in 2021, with 119.35%.

Overall, the average level of arrivals was 7,470.2 persons, with an average absolute increase of 62.5 persons and a relative increase of 0.73%.

Table 6 Absolute and relative changes in arrivals from Dorna Candreni Locality in the period 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	8,409	-	-	-	-	-	-
2020	3,849	-4,560	-4,560	45.78	45.78	-54.22	-54.22
2021	8,443	34	4,594	100.40	219.35	0.4	119.35
2022	7,991	-418	-452	95.02	94.64	-4.98	-5.36
2023	8,659	250	668	102.97	108.35	2.97	8.35
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	7,470.2	62.5		1,0073 (100.73%)		0.73	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Dorna Arini during the period 2019–2023, it was found that in 2023 there was an increase of 44.93% in the number of arrivals compared to the base year (2019) (table 7). The most significant decrease was recorded in 2020, with

23.19%. Compared to the previous year, the most significant increase in the number of arrivals was recorded in 2021, with 64.01%.

Overall, the average level of arrivals was 11,358.8 persons, with an average absolute increase of 1,100.5 persons and a relative increase of 9.72%.

Table 7 Absolute and relative changes in arrivals from Dorna Arini Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	9,796	-	-	-	-	-	-
2020	7,525	-2,271	-2,271	76.81	76.81	-23.19	-23.19
2021	12,342	2,546	4,817	125.99	164.01	25.99	64.01
2022	12,933	3,137	591	132.02	104.78	32.02	4.78
2023	14,198	4,402	1,265	144.93	109.78	44.93	9.78
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	11,358.8	1,100.5		1,0972 (109.72%)		9.72	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Iacobeni during the period 2019–2023, it was found that in 2023

there was an increase of 4.16% in the number of arrivals compared to the base year (2019) (table 8). In 2020 (the pandemic



year), a decrease in the number of arrivals compared to 2019 was recorded, amounting to 31.25%.

Overall, the average level of arrivals was 26.2 persons, with an average absolute increase of 0.5 persons and a relative increase of 1.02%.

Table 8 Absolute and relative changes in arrivals from Iacobeni Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	48	-	-	-	-	-	-
2020	33	-15	-15	68.75	68.75	-31.25	-31.25
2021	-	-48	-33	-	-	-	-
2022	-	-48	-	-	-	-	-
2023	50	2	50	104.16	-	4.16	-
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	26.2	0.5		1,0102 (101.02%)		1.02	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Panaci during the period 2019–2023, it was found that in 2023 there was an increase of 61.05% in the number of arrivals compared to the base year (2019) (table 9). The most significant increase in the number of arrivals compared to the base year was recorded in 2021, with

168.51%. Compared to the previous year, the most significant increase in the number of arrivals was also recorded in 2021, with 177.27%.

Overall, the average level of arrivals was 1,696.2 persons, with an average absolute increase of 159.5 persons and a relative increase of 2.65%.

Table 9 Absolute and relative changes in arrivals from Panaci Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	1,045	-	-	-	-	-	-
2020	1,012	-33	-33	96.84	96.84	-3.16	-3.16
2021	2,806	1,761	1,794	268.51	277.27	168.51	177.27
2022	1,935	890	-871	185.16	68.95	85.16	-31.05
2023	1,683	638	-252	161.06	86.97	61.05	-13.03
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	1,696.2	159.5		1,1265 (112.65%)		2.65	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Poiana Stampei during the period 2019–2023, it was found that in 2023 there was an increase of 44.22% in the number of arrivals compared to the base year (2019) (table 10). The most significant increase in the number of arrivals compared to the base year was

recorded in 2022, with 96.88%. Compared to the previous year, the most significant increase in the number of arrivals was recorded in 2021, with 66.56%.

Overall, the average level of arrivals was 744.6 persons, with an average absolute increase of 49.75 persons and a relative increase of 9.58%.

Table 10 Absolute and relative changes in arrivals from Poiana Stampei Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	450	-	-	-	-	-	-
2020	652	202	202	144.88	144.88	44.88	44.88
2021	1,086	636	434	241.33	166.56	41.33	66.56
2022	886	432	-200	196.88	81.58	96.88	-18.42
2023	649	199	-237	144.22	73.25	44.22	-26.75
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	744.6	49.75		1.0958 (109.58%)		9.58	

Source: insse.ro

Analyzing the absolute and relative dynamics of arrivals in Șaru Dornei during the period 2019–2023, it was found that in 2023 there was an increase of 174.19% in the number of arrivals compared to the base year (2019) (table 11). In 2020 (the pandemic year), a decrease of 5.96% was recorded compared to 2019. Compared to

the previous year, the most significant increase in the number of arrivals was recorded in 2021, with 100.38%.

Overall, the average level of arrivals was 5,651.8 persons, with an average absolute increase of 142.8 persons and a relative increase of 28.68%.

Table 11 Absolute and relative changes in arrivals from Șaru Dornei Locality during 2019-2023

Years	Arrivals (number of persons)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	3,279	-	-	-	-	-	-
2020	3,083	-196	-196	94.02	94.02	-5.96	-5.96
2021	6,178	2,899	3,095	188.41	200.38	88.41	100.38
2022	6,728	3,449	550	205.18	108.90	105.18	8.90
2023	8,991	5,712	2,263	274.19	133.63	174.19	33.63
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	5,651.8	142.8		1,2868 (128.68%)		28.68	

Source: insse.ro

The overnight stays

Analyzing the absolute and relative dynamics of overnight stays in Vatra Dornei during the period 2019–2023, it was found that in 2023 there was a decrease of 21.46% in the number of overnight stays compared to the base year (2019) (table 12). The most significant decrease in the number of overnight stays compared to the base year

was recorded in 2020, with 48.64%. Compared to the previous year, a notable increase in the number of overnight stays was recorded in 2021, with 27.25%.

Overall, the average level of overnight stays was 209,029.8, with an average absolute decrease of 14,810.25 overnight stays and a relative decrease of 5.86%.



Table 12 Absolute and relative changes in overnight stays in Vatra Dornei Municipality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	276,083	-	-	-	-	-	-
2020	141,813	- 134,270	- 134,270	51.36	51.36	-48.64	-48.64
2021	180,469	-95,614	38,656	65.36	127.25	-34.64	27.25
2022	209,942	-66,141	29,473	76.04	116.33	-23.96	16.33
2023	216,842	-59,241	6,900	78.54	103.28	-21.46	3.28
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	209,029.8	-14,810.25		0.9414 (94.14%)		-5.86	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in the locality of Cărlibaba during the period 2019–2023, it was found that in 2023 there was a decrease in the number of overnight stays by 1.87% compared to the base year (2019). The most significant decrease was recorded in 2020, with a drop of 31.4%. Compared to

the previous year, the largest increase in the number of overnight stays was registered in 2021, with 72.20%.

Overall, the average level of overnight stays reached 6,365.8, with an average absolute decrease of 29.75 overnight stays and a relative decrease of 0.47%.

Table 13 Absolute and relative changes in overnight stays in Cărlibaba Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	6,387	-	-	-	-	-	-
2020	4,382	-2,005	-2,005	68.60	68.60	-31.4	-31.4
2021	7,546	1,159	2,664	118.14	172.20	18.14	72.20
2022	7,246	859	-300	113.44	96.02	13.44	-3.98
2023	6,268	-119	-978	98.13	86.50	-1.87	-13.5
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	6,365.8	-29.75		0.9953 (99.53%)		-0.47	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Ciocănești during the period 2019–2023, it was found that in 2023 there was an increase of 17.60% in the number of overnight stays compared to the base year (2019). The most significant increase in the number of overnight stays compared to the base year was recorded in 2022, with 85.46%, while the most significant decrease was observed

in 2020 (the pandemic year), with 35.54%. Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 88.22%.

Overall, the average level of overnight stays was 5,524.8, with an average absolute increase of 206.5 overnight stays and a relative increase of 4.13%.

Table 14 Absolute and relative changes in overnight stays in Ciocănești Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	4,691	-	-	-	-	-	-
2020	3,024	-1,667	-1,667	64.46	64.46	-35.54	-35.54
2021	5,692	1,001	2,668	121.33	188.22	21.33	88.22
2022	8,700	4,009	3,008	185.46	152.84	85.46	52.84
2023	5,517	826	-3,183	117.60	63.41	17.60	-36.59
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	5,524.8	206.5		1,0413 (104.13%)		4.13	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Coșna during the period 2019–2023, it was found that in 2023 there was a decrease of 1.22% in the number of overnight stays compared to the base year (2019). The most significant decrease in the number of overnight stays compared to the base year

was recorded in 2020, with 57.89%. Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 58.58%. Overall, the average level of overnight stays was 1,507.2, with an average absolute decrease of 6.5 overnight stays and a relative decrease of 0.31%

Table 15 Absolute and relative changes in overnight stays in Coșna Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	2,144	-	-	-	-	-	-
2020	903	-1,241	-1,241	42.11	42.11	-57.89	-57.89
2021	1,432	-712	529	66.79	158.58	-33.21	58.58
2022	939	-1,205	-493	43.79	65.57	-56.21	-34.43
2023	2,118	-26	1,179	98.78	225.55	-1.22	125.55
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	1,507.2	-6.5		0.9969 (99.69%)		-0.31	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Dorna Candrenilor during the period 2019–2023, it was found that in 2023 there was a decrease of 17.53% in the number of overnight stays compared to the base year (2019). The most significant decrease in the number of overnight stays compared to the base year was recorded in 2020, with 53.42%.

Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 76.08%.

Overall, the average level of overnight stays was 19,250.6, with an average absolute decrease of 1,068 overnight stays and a relative decrease of 4.71%.

Table 16 Absolute and relative changes in overnight stays in Dorna Candreni Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	24,381	-	-	-	-	-	-
2020	11,359	-13,022	-13,022	46.58	46.58	-53.42	-53.42
2021	20,002	-4,379	8,643	82.03	176.08	-17.97	76.08
2022	20,402	-3,979	400	83.67	101.99	-16.33	1.99
2023	20,109	-4,272	-293	82.47	98.56	-17.53	-1.44
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	19,250.6	-1068		0.9529 (95.29%)		-4.71	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Dorna Arini during the period 2019–2023, it was found that in 2023 there was an increase of 34.19% in the number of overnight stays compared to the base year (2019). The most significant decrease in the number of overnight stays compared to the base year was recorded in 2020, with 39.09%.

Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 79.77%.

Overall, the average level of overnight stays was 25,839, with an average absolute increase of 2,123 overnight stays and a relative increase of 7.62%.

Table 17 Absolute and relative changes in overnight stays in Dorna Arini Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	24,842	-	-	-	-	-	-
2020	15,133	-9,709	-9,709	60.91	60.91	-39.09	-39.09
2021	27,205	2,363	12,072	109.51	179.77	9.51	79.77
2022	28,679	3,837	1,474	115.44	105.41	15.44	5.41
2023	33,336	8,494	4,657	134.19	116.23	34.19	16.23
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	25,839	2123.5		1,0762 (107.62%)		7.62	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Iacobeni during the period 2019–2023, it was found that in 2023 there was an increase of 150% in the number of overnight stays compared to the base year (2019). A significant increase in the number of overnight stays

compared to the base year (2019) was recorded in 2020, with 160.41%.

Overall, the average level of overnight stays was 58.6, with an average absolute increase of 18 overnight stays and a relative increase of 25.74%.

Table 18 Absolute and relative changes in overnight stays in Iacobenii Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	48	-	-	-	-	-	-
2020	125	77	77	260.41	260.41	160.41	160.41
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
2023	120	72	120	250	-	150	-
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	58.6	18		1,2574 (125.74%)		25.74	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Panaci during the period 2019–2023, it was found that in 2023 there was a decrease of 0.41% in the number of overnight stays compared to the base year (2019). The most significant increase in the number of overnight stays compared to the base year was recorded in 2021, with 69.69%, while

the most significant decrease was observed in 2020, with 34.56%. Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 159.28%.

Overall, the average level of overnight stays was 4,228.4, with an average absolute decrease of 3.75 overnight stays and a relative decrease of 0.11%.

Table 19 Absolute and relative changes in overnight stays in Panaci Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	3,696	-	-	-	-	-	-
2020	2,419	-1,277	-1,277	65.44	65.44	-34.56	-34.56
2021	6,272	2,576	3,853	169.69	259.28	69.69	159.28
2022	5,074	1,378	-1,198	137.28	80.89	37.28	-19.11
2023	3,681	-15	-1,393	99.59	72.54	-0.41	-27.46
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	4,228.4	-3.75		0.9989 (99.89%)		-0.11	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Poiana Stampei during the period 2019–2023, it was found that in 2023 there was an increase of 124.96% in the number of overnight stays compared to the base year (2019). The most significant increase in the number of overnight stays compared to the base year was recorded in 2022, with

202.62%. Compared to the previous year, the most significant decrease in the number of overnight stays was recorded in 2023, with 25.67%.

Overall, the average level of overnight stays was 1,479.8, with an average absolute increase of 226.5 overnight stays and a relative increase of 22.46%.



Table 20 Absolute and relative changes in overnight stays in Poiana Stampei Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	725	-	-	-	-	-	-
2020	1,278	553	553	176.27	176.27	76.27	76.27
2021	1,571	846	293	216.68	122.92	116.68	22.92
2022	2,194	1,469	623	302.62	139.65	202.62	39.65
2023	1,631	906	-563	224.96	74.33	124.96	-25.67
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	1,479.8	226.5		1,2246 (122.46%)		22.46	

Source: insse.ro

Analyzing the absolute and relative dynamics of overnight stays in Șaru Dornei during the period 2019–2023, it was found that in 2023 there was an increase of 120.28% in the number of overnight stays compared to the base year (2019). A significant decrease was observed in 2020 (the pandemic year), with 31.78%.

Compared to the previous year, the most significant increase in the number of overnight stays was recorded in 2021, with 125.20%.

Overall, the average level of overnight stays was 14,571.8, with an average absolute increase of 3,081.5 overnight stays and a relative increase of 21.82%.

Table 21 Absolute and relative changes in overnight stays in Șaru Dornei Locality during 2019-2023

Years	Overnight stays (no. of nights)	Absolute changes		Dynamics index %		The rhythm of dynamics %	
		$\Delta t/1$	$\Delta t/t-1$	$It/1$	$It/t-1$	$Rt/1$	$Rt/t-1$
2019	10,247	-	-	-	-	-	-
2020	6,991	-3,256	-3,256	68.22	68.22	-31.78	-31.78
2021	15,744	5,497	8,753	153.64	225.20	53.64	125.20
2022	17,304	7,057	1,560	168.86	109.90	68.86	9.90
2023	22,573	12,326	5,269	220.28	130.44	120.28	30.44
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	14,571.8	3081.5		1,2182 (128.82%)		21.82	

Source: insse.ro

Average length of stay

The average length of stay is an indicator that expresses the average time (in days) tourists spend in accommodation facilities, thus reflecting the potential to retain tourists in a particular area (insse.ro). During the analyzed period (2019–2023) in the localities that make up the ecotourism destination Dorna Land, the average length of stay showed a rather fluctuating pattern in most localities. The highest values of the

average length of stay were recorded in Vatra Dornei, with values exceeding 3 days throughout the entire period; the highest value was recorded in 2019, at 3.86 days, followed by a decrease in 2020 and 2021 of 15.02% and 16.32% respectively compared to 2019, and then an increase in 2022 and 2023 of 8.66% and 10.21% respectively compared to 2021, although still below the level recorded in 2019.

Table 22 Average length of stay (days), during 2019-2023, in the localities comprising Dorna Land

Places	2019	2020	2021	2022	2023
Vatra Dornei	3.86	3.28	3.23	3.51	3.56
Cârlibaba	2.29	1.58	2.03	1.99	1.84
Ciocănești	2.46	2.4	2.21	1.85	2.57
Coșna	1.77	1.74	2.04	1.96	1.71
Dorna Candreni	2.89	2.95	2.36	2.55	2.32
Dorna Arini	2.53	2.01	2.20	2.21	2.34
Iacobeni	1	3.78	-	-	2.4
Panaci	3.53	2.39	2.23	2.62	2.18
Poiana Stampei	1.61	1.96	1.44	2.47	2.51
Șaru Dornei	3.12	2.26	2.54	2.57	2.51

Source: *insse.ro*

In the localities of Cârlibaba, Coșna, and Poiana Stampei, lower values of the average length of stay were recorded throughout the analyzed period, ranging between 1.44 and 2.29 days.

CONCLUSIONS

Analyzing the absolute and relative dynamics of arrivals during the period 2019–2023 in the 10 localities that make up the ecotourism destination Dorna Land (Suceava County), it was observed that the number of arriving tourists increased in 2023 compared to 2019, with values ranging from 2.14% (Coșna) to 174.19% (Șaru Dornei), with the exception of the spa and climate resort of Vatra Dornei, which recorded a decrease in arrivals of 14.89% in 2023 compared to 2019. Relative increases in arrivals ranged from 0.53% (Coșna) to 28.68% (Șaru Dornei), except for the municipality of Vatra Dornei, where a relative decrease of 3.96% was recorded. These increases may be attributed to a slight economic growth in the area, as well as a growing interest among tourists in ecotourism in Dorna Land.

Analyzing the absolute and relative dynamics of overnight stays during the same period in the 10 localities that make up Dorna Land, it was observed that the number of overnight stays increased in 2023 compared to 2019 in only five of the ten localities, with values ranging from 17.60%

(Ciocănești) to 150.00% (Iacobeni). In the other five localities, the number of overnight stays decreased, with values ranging from 0.41% (Panaci) to 21.46% (Vatra Dornei). Relative increases in overnight stays were recorded in Ciocănești, Dorna Arini, Iacobeni, Poiana Stampei, and Șaru Dornei, ranging from 4.13% (Ciocănești) to 25.74% (Iacobeni). In the remaining localities, relative decreases ranged from 0.11% (Panaci) to 5.86% (Vatra Dornei).

The average length of stay during the analyzed period remained relatively low, ranging from 1 day (Iacobeni, 2019) to 3.86 days (Vatra Dornei, 2019). This indicates that the prices of ecotourism services in Dorna Land are relatively high compared to the purchasing power of the visitors. In Vatra Dornei, however, the average length of stay was higher due to its additional advantage as a spa and climate resort.

The analysis of tourist flows in the 10 localities that make up the ecotourism destination Dorna Land highlights significant opportunities for the development of ecotourism as an activity capable of ensuring sustainable development in this area. Ecotourism can generate the economic growth needed in the Suceava mountain region while providing an excellent means of discovering and preserving the local natural environment and traditional culture.



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