SUSTAINABLE DEVELOPMENT SOLUTIONS BRĂTCUȚA VALLEY. CASE STUDY

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Abstract

Tourism development is considered a priority for regional development because of its high potential in many regions of Romania. Brătcuței Valley has a diverse tourism potential and harmoniously distributed, giving the possibility to practice the full range of forms of tourism, from the classics to the latest news application offers rural tourism, adventure tourism. Explore the possibility of exploiting the hydropower potential of the valley Bratca determined considering the average annual flow of this valley during 1991-2010, and also differences in the level of certain areas delineated on the course of this valley. Bratca valley flow was found correlated with differences existing level offers potential hydropower able to ensure energy independence of an isolated customer could be considered as a farmhouses.

Key words: sustainable development,agro tourism, energy solutions

INTRODUCTION

Tourism development is considered in the National Strategy for Regional Development as a priority for regional development because of its potential in many regions of Romania.

By its geographical position, Brătcuța Valley has a diverse tourism potential and harmoniously distributed, giving the possibility to practice the full range of forms of tourism, from the classics to the latest news application offers rural tourism, tourism adventure.

Investments in tourism and culture development may allow regions to use their potential benefits of tourism to improve their competitive advantage in this sector.

The sustainable development means all forms and methods of socio-economic development, which is attached primarily on ensuring a balance between social, economic, environmental and natural capital items (*** 2).

The concept of sustainable development is a recent one in our country emerged from the need to reconcile environmental progress with economic fundamentals (*** 3), so as to achieve optimum development patterns and scenarios in the medium and long term (Dobrescu E., et al.,2005).

On Brătcuța Valley is necessary to establish a sustainable development program, based on knowledge of the region's resources, especially energy-related pollution sources (Gavrilescu E., 2007), to develop

an environmental management (Dumitru C., 2003) due to local authorities, economic operators, travel agents locals and tourists alike (Bran F. et all.1997) ensuring that, in the end, an ecological balance between the environment and progress (Iordache V., et al., 2007). All these aspects are very important for sustainable development, development for future Brătcuța Valley, especially since this region is important for tourism in Bihor County. This was taken into account possibility of ensuring power supply to run your agrotourism locations in their own system, or occurrence about hydro.

MATERIAL AND METHODS

Harnessing hydropower potential of rivers in our country should be treated with a high concern reorientation towards clean energy production, especially due to the fact that the share of hydropower in Romania recovered, representing less than half of that achieved in European countries, If hydrological and geo-climatic conditions comparable to those in our country (Jura R.A., et al.,1995).

Bratca valley (fig. 1), springs from forest national park and has a length of 14 km, the average slope of 35 ‰. Crosses a 2020 ha forest fund (*** 1), has a catchment area of 37 km^2 and flows into Crişul Repede river as its left tributary, is a highly acclaimed tourist area.

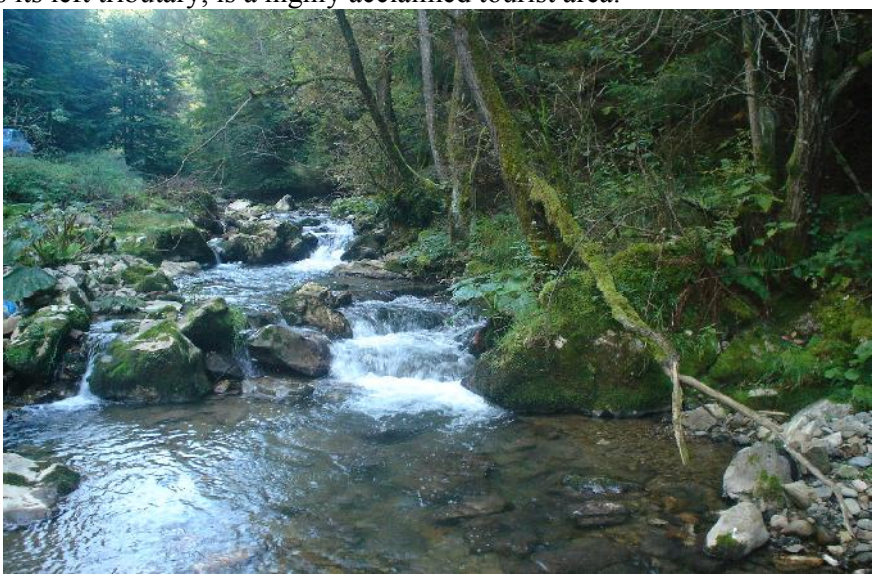

Fig. 1 Picture of the Bratca valley

To assess the feasibility of exploiting the hydropower potential of the Bratca valley were considered average annual flow of this valley during 1991-2010, and differences in level between the 6 sectors defined (table 1).

Table 1

Multiannual average flow (1991-2010) and level differences between sectors considered

No. crt.	Sectors	Level differences (m)	Multiannual average flow (mc/s)
1	k1	238	0.027
2	k2	39	0.060
3	k3	79	0.087
4	k4	5	0.114
5	k5	5	0.135
6	k6	70	0.188

These flows were determined by extrapolation after longitudinal profile sectors, numbered from upstream to downstream call k_1 ... k_n. Next, flows were analyzed according to differences in level (altitude) between sectors, in order to determine changes in relation to the factor mentioned in the sectors mentioned watercourse.

RESULTS AND DISCUSSION

The analysis in Figure 2 shows clearly that the flow rate increases from the Bratca valley k_1 to k_6 sector (most downstream) (figure 2).

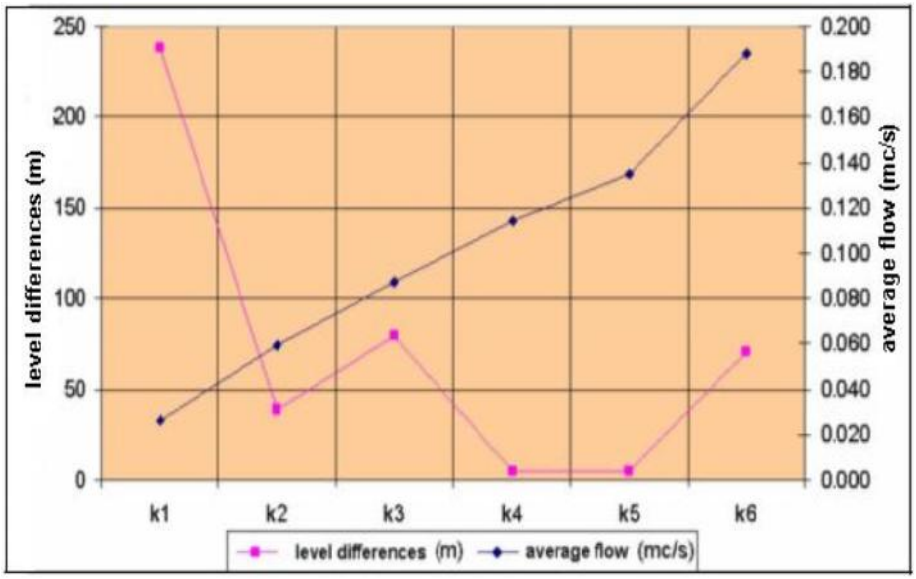

Fig. 2 Changes differences in altitude and average flow defined sectors Bratca Valley

Also in figure 2 finds that differences in level between sectors characteristic of this stream has a very wide variation, explaining it by the length of their different longitudinal profile.

CONCLUSIONS

Considered as a necessity of reconciliation between man and nature, as a new development to support long-term human progress, sustainable development expressed the need to harmonize with the present interests of future generations (Ungureanu D., 2008).

Thus, one can say with certainty that these flows related to differences existing level offers potential hydropower able to ensure energy independence of an isolated customer could be considered as a farmhouses.

The prospect of a real and sustained development of tourism are necessary concerns such as ensuring energy to operate tourist locations, in this case Brătcuța valley known as a tourist area particularly appreciated in Bihor county (Iovan C.I.,2012), water energy is the most available, the especially as it is part of the clean energy.

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