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Indicators measuring the sustainability of tourism

Austrian experiences



Indicators measuring sustainability of tourism: Introduction



- In 2005 a project was launched at Statistics Austria discussing several aspects related **“measuring sustainability of tourism”** by indicators.¹⁾ The work was done based on an **OECD Document** related **“Indicators for the integration of environmental concerns into tourism policies”**, elaborated by the Working Group on Environmental Information and Outlook.²⁾
- The **objective** of the project was ...
 - providing a **critical overview of those indicators proposed in the OECD document**, taking into account relevance and implementation aspects, pointing out the problems of integrating these indicators into a tourism statistical system as well as sources and data access;
 - providing a proposal on **how the scope of the indicator set could cover the most important sustainability issues** linked to **tourism activities** and policies;
 - **discussing several aspects** to be covered and **propose indicators** that would best reflect these aspects;
 - giving an overview and scenario related to the **progress made in Austria in the field of sustainability indicators** focusing tourism;
 - evaluating the **usefulness of the proposed indicators** for the operational work, taking into account in particular the policy relevance, analytical value and measurability;
 - identifying data **sources necessary** for the introduction of indicators;
 - describing and **interpreting preliminary results**.

1) “Indicators measuring the sustainability of tourism, several considerations and results from the Austrian perspective”, supporting paper submitted by Statistics Austria to the Statistical Commission and Economic Commission for Europe (UNECE) for the 53rd plenary session, Geneva, 13-15 June 2015.
2) ENV/EPOC/SE(2001)3/REV1, Paris 2002

Indicators measuring sustainability of tourism: Challenges



Three major challenge-areas are arising:

- Benchmarking with **fixed quantitative target values** for each indicator or criterion is not possible:
 - on the one hand the indicator itself implies a qualitative evaluation only (e.g. cultural aspects or intraregional quality of life cannot be measured in figures).
 - on the other hand some indicators dealing with important sustainability issues are closely connected with mostly biased evaluation where quantitative evaluation fails.
- **Interregional comparison** by means of quantitative indicators is **hardly possible**. As regards the regions' diverse characteristics and situations the determination of specific target values seems counterproductive.
- Most of the examined indicators are **quantitative indicators**, expressing economic, social and ecological states and developments in figures. This raises the question if quantitative indicators alone fulfil the requirements: Significance, reliability, practicability being at the same time little time and cost expensive.

Indicators measuring sustainability of tourism: Austrian examples (1)



February 2002									
Austrian province	Area in km ²	Residents	nights/month	tourists/day	tourists+residents	residents per km ²	tourists+residents/km ²	tourists/km ²	tour/km ² in % of tour+res/km ²
Burgenland	3,965	277,569	86,459	3,088	280,657	70	70.8	0.8	1.1
Carinthia	9,536	559,404	820,670	29,31	588,714	58.7	61.7	3.1	5.0
Lower Austria	19,178	1 545,804	320,023	11,429	1 557,233	80.6	81.2	0.6	0.7
Upper Austria	11,982	1 376,797	434,379	15,514	1 392,311	114.9	116.2	1.3	1.1
Salzburg	7,154	515,327	3 733,302	133,332	648,659	72	90.7	18.6	20.5
Styria	16,392	1 183,303	1 076,812	38,458	1 221,761	72.2	74.5	2.3	3.1
Tyrol	12,648	673,504	6 901,512	246,483	919,987	53.3	72.7	19.5	26.8
Vorarlberg	2,601	351,095	1 289,820	46,065	397,160	135	152.7	17.7	11.6
Vienna	415	1 550,123	369,396	13,193	1 563,316	3,738.3	3,770.1	31.8	0.8
AUSTRIA	83,871	8 032,926	15 032,373	536.87	8 569,796	95.8	102.2	6.4	6.3
July 2002									
Austrian province	Area in km ²	Residents	nights/month	tourists/day	tour+res.	residents per km ²	tour+res./km ²	tour/km ²	tour/km ² in % of tour+res/km ²
Burgenland	3,995	277,569	397,927	12,836	290,405	70	73.2	3.2	4.4
Carinthia	9,536	559,404	3 105,239	100,169	659,573	58.7	69.2	10.5	15.2
L. Austria	19,178	1 545,804	674,027	21,743	1 567,547	80.6	81.7	1.1	1.3
U. Austria	11,982	1 376,797	1 001,484	32,306	1 409,103	114.9	117.6	2.7	2.3
Salzburg	7,154	515,327	2 378,265	76,718	592,045	72.0	82.8	10.7	12.9
Styria	16,392	1 183,303	1 145,164	36,941	1 220,244	72.2	74.4	2.3	3.1
Tyrol	12,648	673,504	4 427,618	142,826	816,330	53.3	64.5	11.3	17.5
Vorarlberg	2,601	351,095	760,065	24,518	375,613	135	144.4	9.4	6.5
Vienna	415	1 550,123	755,785	24,380	1 574,503	3,738.30	3,797.1	58.8	1.5
AUSTRIA	83,871	8 032,926	14 645,574	472,438	8 505,364	95.8	101.4	5.6	5.5

Source: Statistics Austria

Indicators measuring sustainability of tourism: Austrian examples (2)



Austrian Province	Enterprises	Beds	Beds per enterprise	Residents	Area in km ²	Beds per km ²	Residents per enterprise	Residents per bed
Burgenland	1,251	33,045	26	277,569	3,965	8	222	8
Carinthia	11,898	218,873	18	569,404	9,536	23	47	3
Lower-Austria	3,232	72,249	22	1 545,804	19,178	4	478	21
Upper-Austria	4,339	86,370	20	1 376,797	11,982	7	317	16
Salzburg	13,174	213,680	16	515,327	7,154	30	39	2
Styria	7,161	118,833	17	1 183,303	16,392	7	165	10
Tyrol	25,173	388,094	15	673,504	12,648	31	27	2
Vorarlberg	5,893	82,204	14	351,095	2,601	32	60	4
Vienna	431	43,722	101	1 560,123	415	105	3,597	35
Austria	72,552	1 257,070	17	8 032,926	83,971	15	111	6

Source: Statistics Austria

Indicators measuring sustainability of tourism: Conclusions



- In order to measure the sustainability in tourism, **comprehensive indicators** are not available so far which provide a **scala between 0 and 100**, basis for an objective evaluation of sustainability or non-sustainability of tourism.
- This means that **quantitative indicators have to be supported by qualitative information** as well (i.e. interviews with local experts); through its combination comprehensive statements may become possible.
- The **evaluation of sustainability is always region-based**, since a sustainable enterprise (hotel, etc.) is part of a region which may support "sustainability", but it does not determine "sustainability" for a whole region.
- Therefore, sustainability and its **measurement is a regional phenomenon**; an evaluation of sustainability on higher aggregated (national) level is not feasible since in general the regions are too heterogeneous.

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Tourism Satellite Accounts:
http://www.statistik.at/web_en/statistics/tourism/tourism_satellite_accounts/index.html

Environment Statistics:
http://www.statistik.at/web_en/statistics/EnergyEnvironmentInnovationMobility/energy_environment/environment/index.html

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About me



Peter Laimer, PhD

Education	<ul style="list-style-type: none"> Geography (University Vienna) Advanced studies related Tourism- and Export-Industry (University Economics Vienna)
Profession	<ul style="list-style-type: none"> Vice Director, Directorate Spatial Statistics, Statistics Austria Head of Division "Tourism, Motor vehicles, road safety"
International	<ul style="list-style-type: none"> Consultancy (Tourism Statistics, TSA): EUROSTAT (Medstat I/II in Jordan and Lebanon); UNWTO/UNSD (Moldova); furthermore in Croatia, Cyprus, Georgia, Hungary, Oman, Slovenia, Taiwan and Turkey Contributor: TSA Recommended Methodological Framework 2001/2008, International Recommendation on Tourism Statistics 2008, European Implementation Manual on TSA 2001 Statistical Expert of the OECD Tourism Committee Member of the "International Association of Scientific Experts in Tourism" (AIEST)
Teaching	<ul style="list-style-type: none"> University courses related Tourism Management in Linz (tourism statistics) Tourism Management/ University of Applied Sciences in Vienna (statistics)