



Trajnostni razvoj:

**od formalnih zavez
k vplivnim dejanjem**

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Sustainability

Trajnost





Trajnostni razvoj – Model 1



Storitve ekosistemov:

- čista voda in zrak
 - proizvodnja hrane
 - surovine in energija
 - stabilno podnebje
 - blaženje poplav
 - duhovne vrednote
-



33-57 bilijonov \$
(5.000 - 8.000 \$ na prebivalca)

Trajnostni razvoj – Model 2



Trajnostni razvoj – Model 2



$$t \times \sin t = \int_0^t \tau \cdot \sin(\tau - t) d\tau = \left| u = \tau \quad d\tau = du \right| = \left| \frac{(\tau - t) \cos(\tau - t)}{2} \right|_0^t = t \cos(t)$$

$$t \times \cos t = \int_0^t \tau \cdot \cos(\tau - t) d\tau = \left| u = \tau \quad d\tau = du \right| = \left| \frac{\sin(\tau - t)}{2} + \int_0^t \sin(\tau - t) d\tau \right|_0^t = \left| \frac{1}{2} + \cos(\tau - t) \right|_0^t = t \cos(t)$$

$$e^{t\alpha} \times e^{t\beta} = \int_0^t e^{\alpha\tau} e^{\beta(\tau-t)} d\tau = \int_0^t e^{\alpha\tau + \beta\tau - \beta t} d\tau = \int_0^t e^{(\alpha + \beta)\tau - \beta t} d\tau = \left| \frac{e^{(\alpha + \beta)\tau - \beta t}}{\alpha + \beta} \right|_0^t = \frac{e^{(\alpha + \beta)t} - e^{-\beta t}}{\alpha + \beta}$$

$$e^{t\alpha} \times e^{t\beta} = \int_0^t e^{\alpha\tau} e^{\beta(t-\tau)} d\tau = -\frac{e^{\alpha(t-\tau)}}{\alpha(t-\tau)} + \int_0^t \frac{e^{\beta(t-\tau)}}{t-\tau} d\tau$$

$$f(t) \neq F(p), f'(t), g(t) \Rightarrow G(p) \Rightarrow pF(p) G(p) = p[F(p) - f(+0) + f(-0)]$$

$$+ f(+0)] b/p = [pF(p) - f(+0)] \times G(p) + f(+0) G(p) = F(+0) g(t) = F(+0) g(t) \oplus$$

$$F(+0) g(t) + \int_{-0}^0 f(t-\tau) g(t) d\tau. F(p) = \sum_{n=-\infty}^{\infty} (c_n(p-a))^w, c_n = \frac{1}{2\pi i} \int F(p) dp. F(p) = \frac{C_m}{(p-a)^m}$$

$$+ \frac{C_{-m+1}}{(p-a)^{m+1}} + \dots + \frac{C_{-2}}{(p-a)^2} + \frac{C_{-1}}{(p-a)} + (c_0 + C_1(p-a) + C_2(p-a)^2 + \dots) (p-a)^m F(p) = C_{-m} + C_{-m+1}(p-a) + C_{-m+2}(p-a)^2 + \dots + C_{-1}(p-a)^{m-1} + (c_0(p-a)^m + C_1(p-a)^{m-1} + \dots) C_{-m} = \lim_{p \rightarrow \infty} (p-a)^m F(p)$$

$$\frac{d(p-a)^m F(p)}{dp} = C_{-m+1} + 2C_{-m+2}(p-a) + 3C_{-m+3}(p-a)^2 + \dots + (m-2)C_{-1}(p-a)^{m-3} + (m-1)C_{-1}(p-a)^{m-2}$$

$$m(c_0(p-a)^{m-1} + \dots + C_{-m+1}) = \lim_{p \rightarrow \infty} \frac{d(F(p)(p-a)^m)}{dp}; C_{-m+1} = \frac{1}{2} \lim_{p \rightarrow \infty} \frac{d^2 [F(p)(p-a)^m]}{dp^2}$$

$$C_{-m+1} = \frac{1}{2} \lim_{p \rightarrow \infty} \frac{d^2 [F(p)(p-a)^m]}{dp^2}; C_k = \frac{1}{(k+m)!} \lim_{p \rightarrow \infty} \frac{d^{k+m} [F(p)(p-a)^m]}{dp^{k+m}}$$

$$C_{-1} = \frac{1}{(m-1)!} \cdot \lim_{p \rightarrow \infty} \frac{d^{m-1} [F(p)(p-a)^m]}{dp^{m-1}}; \int F(p) dp = 2\pi i \sum_{k=1}^n \beta_{k,n} [F(p) p_k]$$

raba vira, ekosistema

≤

sposobnost obnavljanja





Tragedija skupnega pašnika



Rešitve?



Škode poplav v Sloveniji:
2007, 200 mio EUR
2010, 88 mio EUR
2012, 373 mio EUR (1,5 % BDP)

5 značilnosti ekosistemov

A photograph of a dense forest in autumn. The trees are heavily laden with bright yellow and orange leaves. Sunlight filters through the canopy from the right side of the frame, creating a warm glow and long shadows on the forest floor. The ground is covered with fallen leaves and patches of green grass. In the lower right corner, a portion of a dark wooden fence is visible.

1. Energija sonca

2. Kroženje snovi



3. Strupi so biološko razgradljivi



4. Sodelovanje in tekmovanje



5. Mrežna povezanost





"Trajnostni razvoj pomeni,
da namesto **omejenih** naravnih dobrin
izkoriščamo **neomejene** zmogljivosti
našega (raz)uma."

Juha Sipila

