



From Lab to News: Introduction to Science Journalism for Scientists

Science Communication: An Overview


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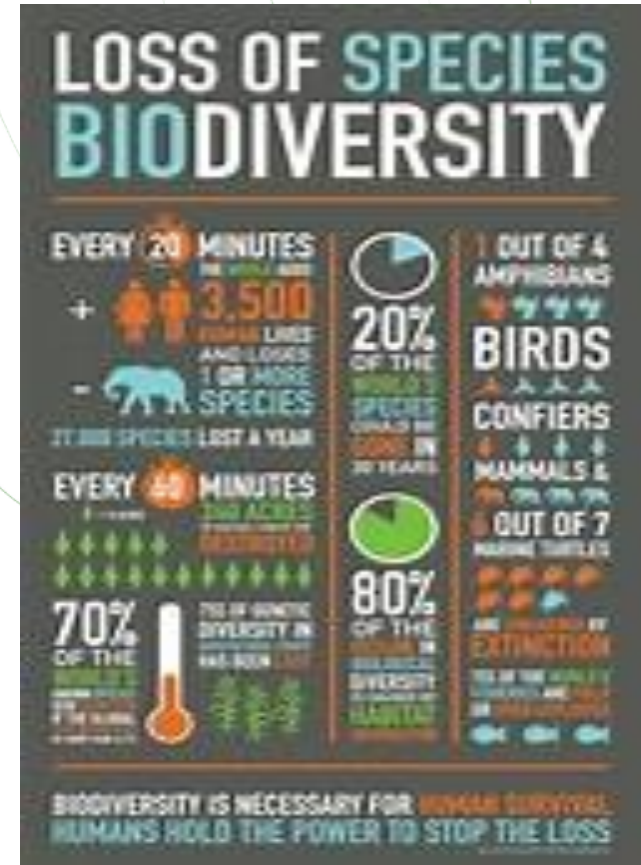
IR0000032 – ITINERIS, Italian Integrated Environmental Research Infrastructures System
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Mission 4 “Education and Research” - Component 2: “From research to business” - Investment
3.1: “Fund for the realisation of an integrated system of research and innovation infrastructures”



 How do you define science communication, and what challenges do you encounter when engaging the public on environmental issues?

Examples of difficulties: misinformation

 **Denial or downplaying of biodiversity loss:** unfounded claims that species loss or habitat degradation is not a real problem or is exaggerated.








Examples of difficulties: polarization

 **Protected area management:**
balancing biodiversity
conservation with economic and
social needs



Examples of difficulties: complexity

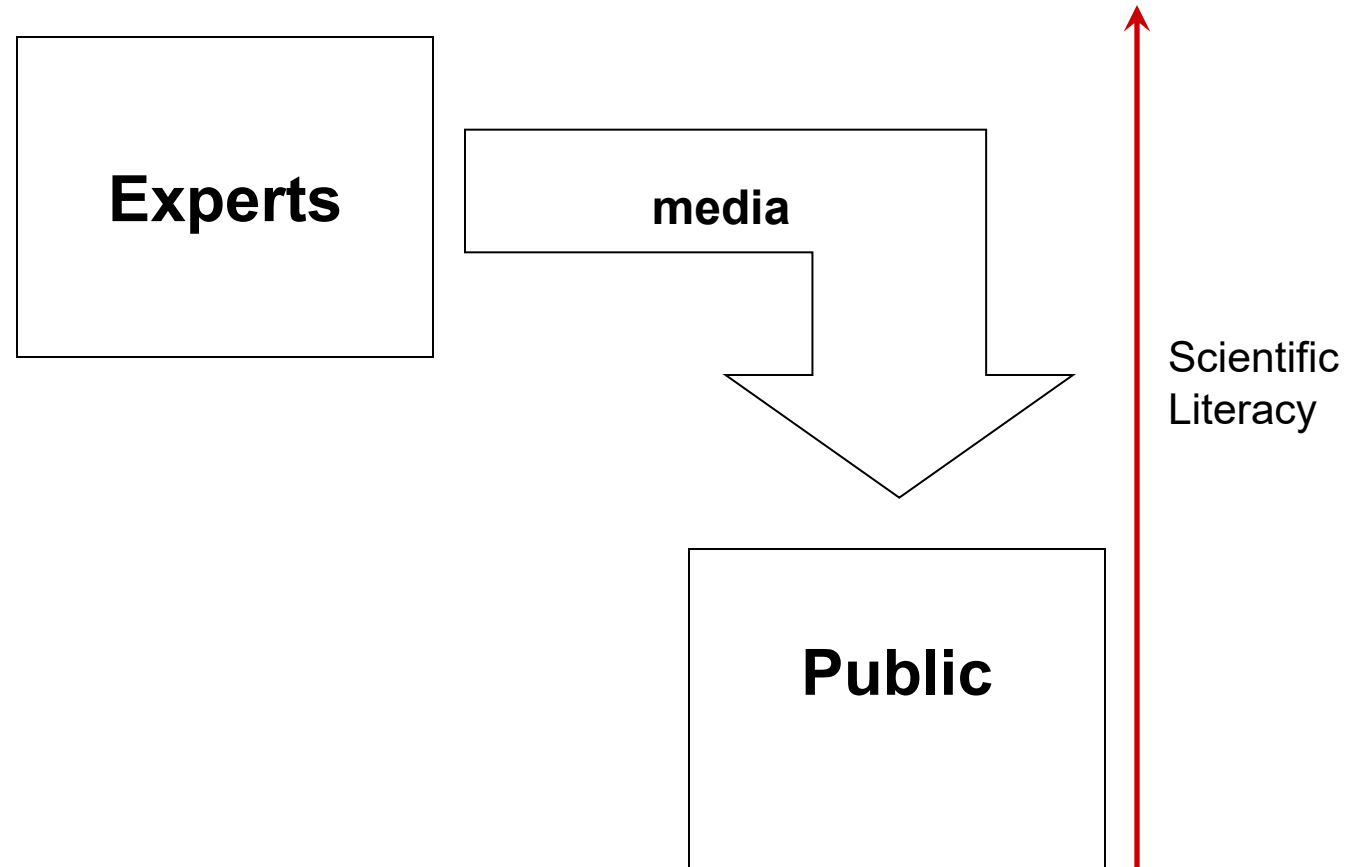
-  **Ecological interconnectedness:** the loss of a single species has cascading effects
-  **Temporal and spatial scales:** deforestation has local impacts but also long-term climate effects
-  **Language:** balancing accessibility and rigor
-  **Public perception:** biodiversity is not just about rare species in remote places, but also food security and people's quality of life
-  **Interdisciplinary approach:** communicating biodiversity to prevent pandemics









Public Science Communication Models

The deficit model



What are the functions of the deficit model?

-  **Reduce complexity**
-  **Knowledge transfer**
-  **Education**
-  **Legitimising science**

The main limitations of the deficit model


- 🌐 **Paternalism and lack of trust in the public**
- 🌐 **Unidirectional communication**
- 🌐 **Lack of consideration of social context, values and identity**

Example of deficit model difficulties in communicating climate changes: the UN «Act Now» Campaign

 **Launch year:** 2020

 **Goal:** Raise public awareness about climate change and encourage individual action to reduce carbon footprints

 **Target Audiences:** Globally, especially through social media



 **Core Idea:** Every individual, through personal choices, can make a difference in fight against climate change

 **Key actions:**

- Reduce **energy consumption**
- Adopt **sustainable habits**
- Promote **green policies**



The UN «Act Now» Campaign: Unidirectional and Abstract ITINERIS Communication

-  **Campaign Focus: Informative with scientific data and urgent messages** (e.g. global warming, CO2 emissions)
-  **Key Issue: No practical solutions** for individuals to apply




The UN «Act Now» Campaign: Lack of Local Adaptation and Contextualization

Global Campaign:




-Ignored **socio-economic** and **cultural differences**.

-**Varying access** to resources and technologies in different regions.

 **Key issue:** Campaign seen as **universal**, overlooking **local realities** (e.g. meat reduction or green tech difficult in low-income areas)





The UN «Act Now» Campaign: Lack of Participation and Engagement

-  **High Visibility:** Strong on **social media**, but lacked **public dialogue**.
-  **Key issue:** No active involvement or channels for feedback
-  **Result:** slogans like "Do something now!" failed to create a **motivated community**.






The UN «Act Now» Campaign: Lack of Collective Solutions and Concrete Policies


-  **Focus on individual actions:** the need for systemic, political solutions was **neglected**.
-  **Key issue:** The illusion that climate change can be solely solved through **individual actions**, without addressing the structural and global causes such as energy, agricultural, and industrial policies.



The UN «Act Now» Campaign: Outcome

-  **Limited Effectiveness:** High visibility, but little impact on behavior change or political mobilization.
-  **“Blame-Shifting” Perception:** Seen as shifting responsibility from governments and corporations to individuals.
-  **Inadequate Solutions:** Proposed actions (e.g. reducing meat, using public transport) were viewed as **unrealistic**, especially without supporting policies.



 Climate change issues require a more complex, interactive approach that actively involves the public in decision-making and solutions, **not just informing them.**

Key Insights

- 🌐 **Tailor communication** to local and social contexts.
- 🌐 **“Provide actionable, practical solutions** that people can realistically implement.
- 🌐 **Foster interactive dialogue** and a sense of community, linking individual actions to a larger collective commitment.

From Deficit to Dialogue Model

The principles of dialogic model

 **Two-way** communication

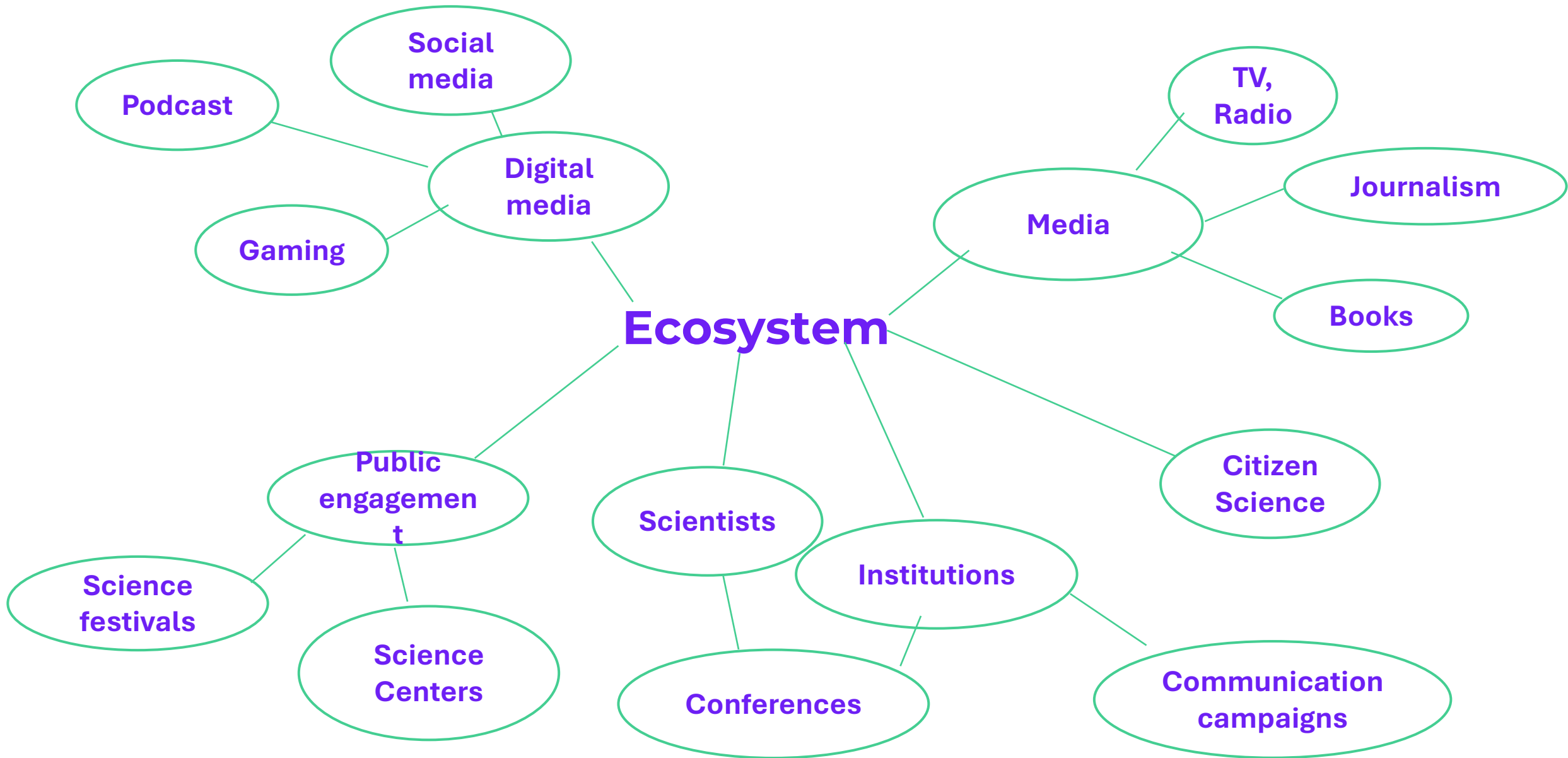
 **Listening**

 Discussion of **values**

 **Context**

 **Engagement**

Science Communication as Ecosystem



Bibliographical references

- 🌐 Bucchi M., Trench B. (2025), *Science Communication. The basics*, Routledge
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- 🌐 Castelfranchi Y., Pitrelli N. (2007), *Come si comunica la scienza?*, Laterza



THANKS!

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