Engaged and responsible universities shaping Europe

....Interacting with society, recognizing ist needs, influencing policies....

Including Citizens in Science and Research

Daniel Wyler University of Zurich

Enlarges scope of research in all fields of science

Enhances public education, understanding of science

Basis for long term policy decisions

Challenges: quality of science, legal, ethical issues
Early science was citizen science, 'Gentlemans science'

Jantar Mantar, Jaipur
By 1900 professionalization, laboratories,....

'The era of the amateur scientist is passing, science must now be advanced by the professional expert‘
Popular Science March 1902, page 477
The gap between public and professional science is filled with

„Public deficit model“ (Wynne 1991)
Article 27: Right to participate in cultural life:

The right to share in scientific advancement and its benefits

Right to participate in the process of science?
The first question of all to be considered, in relation to the present state of scientific knowledge, is: in what ways can the non-specialist take an active part in scientific advancement (experiments, observation of nature, sociological observation, etc.)? How may active participation of this sort profit the individual and science? How can it be encouraged and promoted?
Resurgence of citizens’ participation

New fields of research become interesting and important
Scepticism against ‘official’ science
New technologies (IT, smartphone...)

University projects
Government projects
Activists projects, societies
Platforms, Do it Yourself kits
Hanny's Voorwerp (grünlich) und IC 2497 (Spiralgalaxie). Das Bild wurde von der WFC3 des HST aufgenommen.
Comments

Citizen Science is an element of open science

Citizen Science enlarges scope of research in all fields of science

Enhances public education, understanding of science

Citizen science activities will increase with technical developments

Many scientific and societal issues need citizen science and evidence-based methods: environment, aging, energy; basis for long term policy decisions

High quality Citizen Science is relevant and should be pursued in dedicated ways by scientists, institutions and policy makers

Challenges: Frameworks for scientific excellence, legal, ethical issues
The Role of Universities

Universities have a long tradition of research and teaching, ‘mind set’

Highly motivated and diverse faculty and student body

Suitable infrastructures

Quality, Technical’ skills (statistics, outreach, technology..)

International and interdisciplinary networks

Highly respected in most countries, funding

Need to connect better to society
LERU paper on Citizen Science

Purpose: Establish Citizen Science as accepted and high quality scientific methodology at Universities

First comprehensive document on citizen science at institutions

Addresses institutional concerns

Provides advice to scientists, their institutions and to political bodies

Guidelines for ‘good’ citizen science

Recruitment and retention
Quality and impact
Learning and creativity
Openness and Transparency
Organization, Communication and Sustainability, participation
Credits and Rewards
Ethical and Legal Considerations
Recommendations for institutions

Recognition of citizen science (scientific/educational)

Creating a single point of contact (center, platform for Cit Sci)

Raise awareness among researchers for quality citizen science projects

Including ‘teaching’ citizen science’, Legal, ethical, privacy regulations

Encourage open science practice (repositories,..)

Adapt and complement research evaluation, metrics

Intensify contacts to society and policy making, promote access to platforms
Recommendations for policy makers

Encourage evidence-based projects

Develop guidelines for legal, ethical, commercial and privacy issues

Encourage productive participation of citizens

Encourage long-term collaboration between research institutions and non-governmental organizations
Council of the Academy for Citizen Science and Participatory Science Zurich

**Participatory Science Academy**
- Funded by Mercator Foundation
- **Board**
  - Representatives of teaching from ETH, UZH, Citizen Science organizations, Mercator, etc.
- **Directorate**
- **Operative Management**
  - Learning and teaching Citizen Science, Standards for participatory research, Ethical and legal points, Seed Grants, Research on Citizen Science

**Competence Center Citizen Science**
- **General Assembly**
- **Directorate**
- **Operative Management**
  - Coordinator, Community Manager, Back and front-end developers
  - Developing and hosting a virtual research platform
  - Building a community of Academic Scientists and Citizen Scientists, Coordinating UZH and ETH-Networks

**Zurich platform for excellent participatory science**
Zurich platform for excellent participatory science

Academy for Citizen Science and Participatory Science Zurich
Members include representatives of both the Competence Center Citizen Science and the Participatory Science Academy, Rectorate of UZH and ETH, other units of UZH and ETH, Foundation Mercator and Citizen Scientists