



Citizen Science and Microplastics: Engaging Communities in Ocean Health Monitoring

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Abstract

This study explores the role of citizen science in monitoring microplastics in the ocean. Citizen science has emerged as a powerful tool for engaging communities in environmental monitoring, particularly in the context of microplastics. This study discusses successful projects, methodologies, community engagement strategies, and the implications of citizen science for microplastic monitoring. The study highlights the importance of community engagement and the role of citizen science in environmental monitoring. The study also discusses the challenges of citizen science and the need for further research in this area.

Keywords: Citizen science; Microplastics; Ocean health monitoring

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Empowerment and advocacy

Pa c a c c c a a ac
c a , c a c a a a cac
b c a c a a a
a a ac c [6].

Successful citizen science projects on microplastics

S a c c c a a
c a c , a c c
c a a .

e 5 gyres institute

5 G I a - a a a a
c a c c a . c c c
a , a a a c c a a
a ca Pa c a a a a
c a a a c a c c , c b
a a a a a c a c [7].

Key achievements

Data collection: 5 G c a a a a
a a a a ab
ba a a c a c c c a ac .

Public awareness: a a a a a ab
a c ca a a a ac ,
c a ac .

e ocean conservancy's trash free seas program

Oc a C a c ' T a F S a a c a a
c c c c a a b a c c a
a a . Pa c a c c a a a a
b , c c a c , c c a [8].

Key achievements

Comprehensive database: a a a a b a a
a a a c a a ab a c
a a c .

Community involvement: B a c a c a , a a
b c a a a c a a a
a ab ac c .

e microplastics project

M c a c P c ac c c a a c
c a c a a a
V c c a a a a a a c
a a c a c c c a .

Key achievements

Standardized methodologies: c a a c
a c c a a b a a c c , a
c a ac a .

Education and training: a a a
a c a , a a a
c c a c a b a c a [9].

Methodologies for citizen science monitoring

Sample collection

C c ca c c a a a a a
c c . :

Sampling equipment: V c a , ,
b c a a a , a ca ca
c a c c .

Sample size and location: G c a
b a a ca b a c ac
c a x ba a a , , a a [10].

Laboratory analysis

A c c , a a b a a ab a
DIY a a c a a ab :

Visual identification: V a c c a
a a a c a c a c ba , a , a
c .

Chemical analysis: M a c a , c a
F - a a (FTIR) c c , ca b
c c ca c c a c .

Data management and reporting

Da a c c b c c a ca a a a
a a a a :

Data platforms: Ma a a
a a a a , a acc b a c a b c .

Feedback and impact: P a c a bac
c b a acc a c a
c .

Challenges in citizen science for microplastics

D a b c c c , a c a

Da a c c c c a ca
c a ab x c a c a
ca a c . c -ba ac ca
a c a a a a .