



Insight

Impacts of conservation activities on people who are incarcerated: a case study based on qualitative and quantitative analyses

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ABSTRACT. In the past two decades, conservationists and the corrections sector have implemented collaborative ecological restoration projects, creating more inclusive arenas for conservation. These venues provide people who are incarcerated with opportunities to have a positive impact on their environment, and for ecologists to communicate science and the importance of nature with people in nature-deprived environments. We provide examples of conservation programs and their associated media pieces nationwide, whose descriptions, to date, have been almost entirely anecdotal and without formal evaluation. In this study, a collaboration of ecologists and social scientists analyzed impacts on the “incarcerated citizen scientists” who participated in two conservation projects coordinated by these ecologists at the Salt Lake County Jail, Utah, using quantitative and qualitative approaches, including voluntary pre- and post-surveys. The quantitative results informed potential outcomes, but were inconclusive. However, the qualitative results revealed that a majority of the participants reported gaining knowledge about science and conservation, and that about a quarter of them reported psychological benefits from participating, such as feeling that they were able to give back to their community through the project. These results document the potential positive impacts that participation in ecological restoration projects can help promote well-being and community involvement, and to increase science knowledge from all participants. The results also reinforce the importance of collaborations between scientists who use quantitative and qualitative approaches and analytical tools, which, when combined, provide the capacity to measure, analyze, and interpret data from human participants. These considerations should be further explored with collaborations of natural scientists, social scientists, corrections staff, and people who are incarcerated as ecological restoration projects in correctional institutions become more prevalent.

Key Words: *citizen science; conservation; incarcerated; prisons; qualitative analyses; restoration ecology*

INTRODUCTION

Engagement between ecologists and groups outside of academia is increasingly common, to the benefit of both groups (Stoecker 2009, Nadkarni et al. 2019, MacArthur et al. 2020). Some of these undertakings have been through citizen science projects (Silvertown 2009, Raddick et al. 2013), in which non-scientists participate in collecting or analyzing data for projects established by scientists. Typically, these projects have engaged volunteers who are able to travel to field sites or who can gain access to internet-based data. Participation in citizen science projects therefore tends to be limited to people with financial and educational privilege, and involvement by those without such privileges and access has understandably been limited. However, individuals who lack access to field sites and the internet—many of whom have been underserved by science and deprived of the physical, psychological, and emotional benefits of nature—would also be likely to be interested in and benefit from participation in these scientific engagement activities.

In the past two decades, scientists and conservationists have innovated programs and projects that directly involve one such group—adults and youth who are incarcerated—with conservation and ecological restoration. The media described these early efforts in positive ways, reporting that people who are incarcerated demonstrated their value, care, and interest for nature and conservation. The positive reception of such programs encouraged incarcerated people and participating corrections institutions to participate in these programs (Horns et al. 2020,

Nadkarni et al. 2022). Because the resources for implementing formal evaluative have been limited, the media have played an important role in giving people who are incarcerated and corrections staff a platform to describe anecdotal program impacts. In the last decade, scientists and conservationists have crossed sectoral and institutional borders to directly engage “incarcerated citizen scientists (ICS)” in rearing endangered and rare animal and plant species that have been released or out-planted for ongoing projects (Table 1). We use the term “citizen science” rather than the more recently coined “community scientist” because all of the participants are citizens of the United States and because it links them to established and well-respected “citizen science” efforts in which people who are not incarcerated participate.

Citizen science projects involving non-incarcerated citizens have provided benefits for conservation, which, among other projects, include greater numbers and high quality of organisms produced overall (Dickinson et al. 2010). These same benefits have also accrued from projects with individuals who are incarcerated that were carried out in state prisons and county jails, and juvenile detention centers. A summary of such projects (Kaye et al. 2015) highlighted multiple benefits of prison-based citizen science activities to date. First, participation in habitat conservation projects improves ecologists’ capacity to restore landscapes, conduct research, and recover threatened and endangered species (Nadkarni 2006). Restoration ecologists partnering with Sustainability in Prisons Project (LeRoy et al. 2012), for example,

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