

2016

Inmate Populations in a Disaster: A Labor Force, a Vulnerable Population, and a Hazard

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INMATE POPULATIONS IN A DISASTER: A LABOR FORCE, A
VULNERABLE POPULATION, AND A HAZARD

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements of the degree of
Master of Arts in Sociology

in

The Department of Sociology

by
Jordan Carlee Smith
B.A., Baylor University, 2014
December 2016

This work is dedicated to those who have supported and encouraged me throughout this process, who I know will continue to be my biggest fans throughout the next couple years as I grow as an academic and person. My husband and partner, Tanner Purdum, thank you for the hours spent together in computer labs and libraries, for being my sounding board for the thoughts and ideas that came to form this paper, and for the millions of small acts of kindness that has made graduate school not only bearable, but fun. My parents I thank for never ceasing to speak strength and courage over me to press forward, I hope to be worthy of your confidence in who I am. My sisters, who are my sun and my moon, continue to be that which gives me life and the power to be. To my thesis adviser, Dr. Michelle Meyer, I will forever be grateful for believing in the value of this project and for providing me with a role model for the kind of scholar I want to be.

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ABSTRACT

Within the disaster literature, few studies have been devoted to the role of incarcerated populations as a source of labor within the context of emergency operations. When faced with a lack of resources, emergency management rely on inmate labor forces to prepare for and respond to hazards and disasters. In the U.S., inmates from the Louisiana State Penitentiary helped with sandbagging the facilities in preparing for the potentially flooding of the Mississippi River and Hurricane Katrina (Gaillard, 2012). The state of California has long maintained inmate firefighting forces to combat destructive wildfires statewide (Goodman, 2012). However, there has never been a comprehensive analysis of how inmate labor forces are utilized as resources for emergency management activities across the U.S. In order to address this gap within the literature, I analyze state Emergency Operations Plans and the various tasks in which inmates are described as responsible for. In addition to the analysis of inmate labor forces, the various prescribed identities of inmate populations within the EOPs are examined. Not only are inmate populations described as a labor resource, but also as a vulnerable population deserving of special protections and yet also a hazardous population, requiring extensive measures to protect the greater public from potentially dangerous situations which they might incite such as riots or hostage situations. Within the state EOPs, differences in how emergency management identifies inmate populations as well as the type of labor activities in which they participate in are examined.

INTRODUCTION

Within the field of emergency management, incarcerated persons (i.e., inmates) occupy a variety of roles and identities. Inmates have historically served the efforts of emergency response and recovery to disasters as a source of labor, most notably within the field of wildfire response (Goodman 2012). They have also traditionally represented a hazard; in other words, they are viewed as a source of potential risk. For example, emergency management officials have concentrated preparedness efforts to respond to hazards and risks associated with the inmate populations such as riots, hostage situations, escapes, and general violent disorder (Freeman 1988; Schwartz and Barry 2005). In more recent history, scholars and policy-makers have begun to recognize inmates as a vulnerable population in case of extreme events, who lack the resources and individual agency necessary to protect themselves in the event of an emergency or a disaster. Inmates are considered vulnerable since they must fully rely on the staff of the institution to provide for their safety and welfare should a natural disaster or technological event threaten a corrections institution (Schwartz and Barry 2005; Robbins 2008; Hoffman 2009; Gaillard and Navizet 2012; Motanya and Valera 2016). Efforts to integrate this vulnerability into emergency planning gained meaningful support after Hurricane Katrina, during which inmates of the Orleans Parish Prison suffered due to a lack of planning and preparedness to ensure to their safety or evacuation from harm's way (ACLU 2006).

Despite this movement to create or adapt policies related to inmates in disaster, there has been little effort to comprehensively examine these different conceptualizations of inmates in relation to emergency management. Few disaster scholars have described inmates as a socially vulnerable population, who are more prone to disaster than others due to power relations and social systems that generate unequal risks for different population groups (Bankoff et al. 2004;

Thomas et al. 2013; Cutter et al. 2003). Nor has there been research on the role or roles inmates play as a source of labor within disaster response and recovery efforts. When faced with a lack of resources, inmates may be used to prepare and respond to disasters. Yet, we know very little about this practice across the U.S. Specifically, I found only one study that addresses this issue for the entire country—that study included a *single* question on inmate labor in disasters within a broader survey about emergency preparedness of state-level Department of Corrections (Schwartz and Cynthia 2005). Anecdotal examples of inmate labor forces responding to natural and technological disasters exist across the U.S. For example, inmates from the Louisiana State Penitentiary helped with sandbagging the facilities in preparing for flooding of the Mississippi River as well as during Hurricane Katrina (Gaillard 2012). The state of California has long maintained inmate firefighting forces (Goodman 2012).

This lack of research on inmates in disasters means numerous questions exist. Participation in various emergency management activities may increase the vulnerability of inmate populations to the impacts of disasters, or conversely may result in increased liability for communities if inmates are injured or happen to injure others or commit crimes while doing emergency response activities. Without comprehensive knowledge of how common and integrated the practice of using inmate labor forces for emergency management is, such discussions cannot take place.

In order to address this gap in the literature, this thesis explores the practice of using inmate labor forces in the emergency and disaster context in the U.S., offers a taxonomy of the various kinds of emergency response and recovery activities in which inmates participate, and examines the different roles and identities invoked within emergency management operations (i.e., source of labor, hazard, or vulnerable population) and how these roles and identities vary

across states. This research is based on a content analysis of state-level emergency management plans for 47 states. This research also serves to expand our knowledge on emergency management at the state-level, as the majority of emergency management research has been devoted to emergency management at the federal or local levels, while the state-level emergency management has received the least amount of attention (Kapucu, Augustin, and Vener 2009; Waugh and Streib 2006).

The literature review begins with an introduction to the general inmate population, followed by what we currently know about inmate labor, and further includes the known roles and identities of inmates within emergency management context. I then describe the research methods and documents analyzed in this study. My results show the various differences in the identities and roles of inmate populations as invoked by emergency management throughout state-level plans and the implications which follow. I then describe the resulting taxonomy of disaster response and recovery activities that include inmate labor and conclude with a discussion on how common the use of inmate labor is within the context of state-level response and recovery activities as well as differences between states' and regions' use of inmate labor forces.

LITERATURE REVIEW

Emergency Management and the State Government

Emergency management represents organized efforts to prevent loss of life and property throughout the life cycle of a disaster. Such efforts include actions taken to (1) mitigate the potential impact of a disaster; (2) ensure that planning efforts and subsequent training take place in effort to organize and prepare for an event; (3) coordinate response activities to protect life and property; (4) and coordinate recovery activities to restore access to necessary resources and services (Waugh and Streib 2006). In the United States, the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* dictates that emergency management is the joint responsibility of the Federal, State, and local government (Urbina and Wolshon 2003). In reality, emergency management generally takes a “bottom up” approach, allowing for local communities to first respond and then request additional state or federal resources if local response efforts are overwhelmed (Schneider 2014). The state government is then tasked with providing assistance to affected localities as well as partnering with the federal government if both local and state resources are inadequate to comprehensively respond to the impact of such an event (FEMA 1996; Schneider 2014). However, neither state-level response or federal response are intended to prevent local communities from responding to emergencies or disasters in their locality, rather they are intended to provide a comprehensive and coordinated response. “The higher levels of government are not intended to supersede or replace the activities of the lower levels. All three levels of government are supposed to develop coordinated, integrated emergency management procedures, and they should all participate in the process of implementing disaster relief policies” (Schneider 2014:31).

By federal mandate, each state is required to organize an agency or department with the responsibility of emergency preparedness and relief (Schneider 2014). In order to facilitate such assistance and coordination, such departments are responsible for developing “comprehensive plans and programs for preparation against disasters” throughout their state jurisdictions (*Stafford Act* para. 201(b)). Should an emergency or disaster occur, states are then guided in their emergency management efforts by their developed comprehensive emergency operations plan (Urbina and Wolshon 2003; Schneider 2014). The emergency operations plan for each state is the primary document that represents (1) the organized network of pre-determined actions and resources assigned to both individuals and organizations within the state; (2) the network of authority within the assigned actions as well as how those actions will be carried out; (3) actions that will be taken to protect both persons and property; (4) the various resources available for response and recovery operations such as personnel, equipment, facilities, supplies, and other resources available; (5) and finally, identifies the steps to address mitigation concerns (FEMA 1996; Schneider 2014).

Across the various states, emergency operations plans share common elements, many of which are required by the federal government in effort to provide standardized levels of response. If states do not comply with standardized guidelines, they may not be eligible to receive federal financial aid in a disaster event. However, state agencies retain a certain flexibility allowing emergency officials to tailor their plan to the specific needs and particular vulnerabilities to various hazards of their area (Schneider 2014). Within this planning environment, state-level department of corrections, and potentially inmates, could play a role.

A Brief Introduction to U.S. Inmate Populations

The U.S. is the world's leader in rates of incarceration with nearly seven million adult persons under the supervision of the U.S. correctional system. Of those under supervision, more than two million persons are incarcerated, meaning they are confined to state or federal prisons or held in local city or county jails, in contrast to those on probation or parole who reside in the community (Bureau of Justice Statistics 2016). At year-end of 2014, 97 percent of inmates were sentenced to more than one year in jail or prison. The remaining 3 percent were either not yet sentenced or had confinement terms of less than one year (Bureau of Justice Statistics 2015).

The total inmate population within the U.S. is skewed based on race, gender, and education—those incarcerated are disproportionately people of color, men, and less educated. Of the inmate population, 33.6 percent are white, 35.8 percent are black, 21.6 percent are Hispanic, and 9 percent are reported as other. African American men are especially overrepresented in the inmate population. “Black men are nearly six times as likely to be incarcerated as white men and Hispanic men are 2.3 times as likely. For black men in their thirties, 1 in every 10 is in prison or jail on any given day” (Sentencing Project 2015: 5). Incarceration is also predominantly a male experience, as more than 90 percent of all prisoners are men. For male U.S. residents born in 2001, the lifetime likelihood of imprisonment for white men is 1 in 17, for black men it is 1 in 3, and it is 1 in 6 for Latino men. For women, the rate of imprisonment for white women is 1 in 111, for black women it is 1 in 18, and Latina women it is 1 in 45 (Sentencing Project 2015). Furthermore, on average, inmates have completed less than twelve years of education (Pettit & Western 2004).

With this burgeoning inmate population, overcrowding has become a major concern. At the end of 2014, a report from the Bureau of Justice Statistics indicated that 28 states within the

U.S. were over “facility capacity,” indicating they were holding more inmates in custody than the maximum number of persons the facilities were designed to contain. For example, the state of Illinois held 48,300 inmates in their facilities in 2014 at a rate of 150 percent capacity. Other states over facility capacity include Ohio (132 percent), Massachusetts (130 percent), and Nebraska (128 percent), among others. Also, 18 states had surpassed the threshold of “operational capacity,” which means they had more inmates within their facilities than they had the staff and resources to adequately oversee (Bureau of Justice 2015).

Inmate Labor in America

Having this large minority of the population incarcerated raises questions about productivity and methods through which these persons can contribute to society. Using inmates for labor is such one method, and has a long history in American policy. The precedent for using inmate labor forces was ratified with the Thirteenth Amendment to the U.S. Constitution after the Civil War. Intended to outlaw the practice of slavery, the Thirteenth Amendment included the notable exception for persons convicted of a crime (Adamson 1983; Raghunath 2009). This exception paved the way for states to pass laws criminalizing the activities and behavior of newly freed black slaves in order to reinstate the practice of slavery via convict-leasing, and thus, effectively maintaining the integrity of a white supremacist racial hierarchy (Adamson 1983; Hallett 2002).

Drawing from the language and structure of slavery, the criminal justice system throughout the country allowed for persons convicted of crimes, to be leased out to businessmen, planters, and corporations for hard labor on railroad development, sugar and cotton plantations, coal mines, turpentine farms, phosphate beds, brickyards, sawmills, and any other economic venture where labor was needed (Adamson 1983; Mancini 1996; Gilmore 2000; Hallett 2002).

During the Great Depression, the practice drew forceful criticism from free laborers and labor unions fearing the ever-expanding use of inmate labor would further harm an already bloated work-force (Gilmore 2000; Hallett 2002; Thompson 2012). Federal legislation was passed to limit inmate labor to government contracts with pre-determined thresholds which could not be breached as well as a ban on interstate commerce (Hawkins 1983; Gilmore 2000; Chang and Thompkins 2002). However, these restrictions were lifted in 1979 by the Justice System Improvement Act as an effort to “improve correctional industry operations and to encourage public and private sector interaction,” showcasing the influence of economic interests in legislation determining the activities of prisoners (Hawkins 1983: 106).

Today, inmate labor operates within the context of mass incarceration, brought about by radical economic transformations of the 1970’s coupled with the The War on Drugs. “Since the 1970s, the United States has mounted an aggressive campaign to incarcerate, tripling the number of prisons and prisoners” (Hooks et al. 2004:38). With the expansion of global capitalism, smaller private manufacturers (which had historically fought to prevent competition with inmate labor) began to be replaced by large manufacturers who did not fear small-scale inmate operations and thus do not lobby against the use of prison labor (Hawkins 1983). While the need to employ cheap labor from poor developing countries became a staple in the global capitalist industry, the diffusion of opponents of prison labor prompted manufacturers in the states to return to prisons as an increasingly lucrative alternative (Hawkins 1983; Thompson 2012). This increase in demand was followed by an increase in supply.

The political and racialized rhetoric of “The War on Drugs” created and continues to sustain policies that not only expanded punishable crimes but increased the length of sentences as well, particularly for nonviolent drug violations (Hallett 2002; Thompson 2012). Corporations

were able to commandeer the labor potential of the large mass of incarcerated individuals, and continue to do so (Change and Thompkins 2002; Hallett 2002; Thompson 2012). With mass incarceration, the Thirteenth Amendment of the U.S. Constitution remains actively cited as legal precedent for forced labor throughout the U.S. (Raghunath 2009). As some scholars have noted, the use of inmate labor mimics the institution of slavery: “The carceral reach of the state and private corporations resonate with the history of slavery and marks a level of human bondage unparalleled in the 20th Century” (Gilmore 2000: 195).

Inmate labor practices in the U.S. include a variety of compensation structures and job activities. The typical wages for inmates participating in such work, if they are paid at all, ranges from \$0.12 to \$1.15 an hour on average for federal inmates. For state inmates, wages are less, ranging from \$0.13 to \$0.32 (Thompson 2012). In states such as Virginia, Ohio, New Jersey, Florida and Georgia, inmates are given time off of their sentences instead of a wage. This policy was particularly criticized after the BP Oil Corporation used inmate labor forces through work release programs for the 2010 oil spill cleanup effort. According to Thompson (2012):

The BP Oil Corporation chose to hire prisoners for its clean-up operations because it could work those men an average of seventy-two hours a week and pay them little to nothing. It also could get away with providing only flimsy coveralls and gloves as protection from extensive exposure to crude oil and chemical dispersants (p. 43).

This quote touches on the variety in types of job activities that inmates perform. There are a myriad of modern industries that rely on the cheap, expendable, and seemingly endless supply of labor that prisons provide (Thompson 2012). Federal Prison Industries, Inc. (UNICOR), a wholly government-owned corporation within the U.S. Department of Justice, employs federal inmates in various industries (Chang and Thompkins 2002; Thompson 2012).

UNICOR has a shortlist of the manufacturing capabilities their inmates provide, including but not limited to: metal fabrication, tool & die, welding, machining, coating and finishing, wire and plastics braiding and assembly, injection molding, extrusion molding, printing & bindery services, warehouse distribution, CAD design and production drawing, data and media conversion, data entry and work processing, contact centers and help desks, forward and reverse logistics, recycling of electronics and other materials, potting, soldering, lighting, power distribution, assemblies, communications; wood-cutting, cabinetry, woodworking, finishing, cutting and sewing of fabrics and materials, embroidery and silk screening upholstery, and pattern-making (UNICOR n.d.). Prominent private companies such as IBM, Dell computers, the Parke-Davis and Upjohn pharmaceutical companies, Toys 'R' Us, Chevron, IBM, Motorola, Compaq, Texas Instruments, Honeywell, Microsoft, Victoria's Secret, Boeing, Nintendo, and Starbucks have also used inmate labor to manufacture products (Hallett 2002; Mosher, Hooks, and Wood 2007).

Inmates: A Hazardous Population

Amidst calls for more resources to be devoted to emergency preparedness, particularly within public institutions, there remains very little accessible research examining emergency management within the field of corrections, let alone the roles of inmates (Schwartz & Barry 2005). Emergency planning resources within corrections systems are primarily devoted to preparing for and preventing violence and disorder from the inmate population, reflecting the perspective that inmates are inherently hazardous (Freeman 1998; Schwartz and Barry 2005). Scholars have noted that it is often riots or violent inmate-involved events that prompt departments to develop emergency management plans. Before the infamous Attica prison riot in 1971, only 10% of state level Departments of Correction (DOC) had emergency management

plans, twenty five years later, 71% of state DOCs had emergency plans (Freeman 1998). Within the guide to preparing for prison emergencies published jointly by the National Corrections Institute and the Department of Justice, it is stated that, "Perhaps ironically, the very people who are locked up and whose safety must be assured are the source of the most frequent and the most serious prison emergency situations" (Schwartz and Barry 2005:3). The primary goal of emergency management within the field of corrections is to protect the community from inmates who represent a threat and a hazard (Schwartz and Barry 2005). Thus, when the broader community is assured of protection from the possible hazard of an inmate and corrections staff are confident in their protection from the threat of inmate disorder and violence, only then can the inmate population be viewed as vulnerable and worthy of protection from harm or infringement on their rights.

Inmates: A Vulnerable Population

Of those under the supervision of the U.S. justice system, prisoners are particularly vulnerable in emergency situations such as natural and technological disasters. Inmates are uniquely unable to provide and care for themselves, compared to the general population and other institutionalized populations due to their containment within a correctional facility. Inmates must fully rely on the correctional institution to ensure their safety and welfare (Hoffman 2009; Gaillard and Navizet 2012), including movement to safe areas of the facility during a tornado or flooding and evacuation in case of extreme events. Guidance from the National Institute of Corrections acknowledges the uniqueness of planning for persons who are made vulnerable because of their connection with that institution: "Prisons, however, are not like other public agencies. They are responsible for the safety of large numbers of individuals who are usually

locked up and cannot protect them-selves in many emergency situations” (Schwartz and Barry 2005: 3).

While many corrections institutions have plans in place for emergency situations, there are a growing number of scholars and policymakers who argue that these plans are inadequate and ineffective without a dedication to training and practice (Hoffman 2009; Robbins 2008). Schwartz and Barry (2005) identified four traditional beliefs entrenched within the culture of corrections that prevent adequate emergency preparedness: (1) management is largely a matter of personality as opposed to procedure and policy; (2) a lack of consistency and integration between different planning documents for different types of emergencies; (3) the deeply entrenched belief that riots and hostage situations (in which inmates are hazards) are the only emergency situations that truly matter; and finally (4) a similarly entrenched belief that each emergency situation is unique, making planning irrelevant.

A lack of social visibility also allows for this lack of planning to continue. The broader public is generally unaware of inmate experiences and vulnerabilities (Gaillard and Navizet 2012). However, in moments when a highly publicized event occurs, the veil is pulled back. These issues were most salient after the widely publicized experience of Orleans Parish Prison inmates in the aftermath of Hurricane Katrina. According to the American Civil Liberties Union (ACLU 2006) report “Abandoned and Abused,” inmates of this prison were abandoned by deputies and left to languish in their locked cells amidst chest-high water that was contaminated by sewage. After days had passed without access to food or water, the inmates were finally rescued from the facility and bused across the state to other corrections facilities. Furthermore, the constitutional rights of inmates were threatened by the systemic disruption of the Criminal Justice system. Specifically, the area affected by Hurricane Katrina lost numerous staff who

provided legal representation and supported prisoners in exercising their rights to a speedy trial, not to mention the destruction of physical records and even evidence to be used for fair trials (Robbins 2008).

Inmate Labor in Emergency Management

The above discussion of inmates as labor, hazard, or vulnerable population provides the groundwork for understanding how inmates are or are not included in scholarly research on disaster. Within the disaster literature, evidence that inmates participate in emergency response and recovery activities remains scarce. The only national study is within a survey sponsored by the Department of Justice and the National Institute for Corrections. The study primarily focused on emergency and disaster planning and preparedness within each state's Department of Correction, and included responses from 34 states. The survey included only one "yes/no" question in reference to inmate labor in disasters: "Inmates are trained to provide community assistance in event of disasters" (Schwartz and Barry 2005 p. 197). According to the survey results, 44 percent of the states reported their inmates were trained to provide community assistance in the event of a disaster, but there is no data to describe what this labor entails, what the training includes, how inmates are compensated, and if these activities are voluntary. In regards to relationships between state-level department of corrections agencies and state and local emergency management agencies, 85 percent reported having a working relationship with their state-level emergency management agency, and 47 percent reported having a relationship with county-level emergency management agencies. The authors concluded, "Using inmates to help with community disasters is not a new or recent idea, but planning for that eventuality is an outgrowth of the recent emphasis on developing comprehensive, detailed, and realistic emergency policies and plans" (Schwartz and Barry 2005:197). It is meaningful to underscore

the various limitations to that publication. Specifically, the data is limited to only 34 states, reliant on respondent recall to a survey, and is now more than eleven years old—pre-Katrina, Sandy, and Ike, which are the largest disasters to ever occur in the country.

In the absence of comprehensive national analyses of inmate labor in emergency management, special attention within the academic literature has been paid to states such as California and its widely publicized use of inmate firefighting forces (Goodman 2012; Brooker 2013). While California is by no means unique in its use of inmate firefighter work crews, they are uniquely structured and highly integrated within the network of emergency response. CALFIRE crews consist of inmates of the California Department of Corrections and Rehabilitation partnering with the California Department of Forestry and Fire Protection. CALFIRE resources and crews are responsible for responding to fires, earthquakes, hazardous materials spills, major transportation incidents, search and rescues, public health emergencies, flooding, multi-casualty, and terrorism or weapons of mass destruction incidents. When crews respond, they form “strike teams” of two crews made up of 14 or 16 inmates each with a civilian fire captain as leader. These strike teams often work 24 hour shifts. CALFIRE has 196 crews comprising 4,300 state prison inmates assigned to any of the 39 physical camps. Most of the time crews stand ready and are responsible for maintaining and protecting 33 million acres of state and private lands. They respond to an average of 5,600 wildfires every year. Because of the size and experience of their operation, CALFIRE often takes the lead in responding to major incidents within the state—responding to more than 350,000 total emergencies every year (Brooker 2013).

Outside of California, in 2009, the inmates at the medium-security Palmer Correctional Center in Alaska became the first group of incarcerated individuals to receive disaster training

from their local Community Emergency Response Team (CERT) (CERT 2010). Corrections officials argued that the training would not only benefit the inmates by teaching them a skill and building their self-esteem, but also their home community to which they would eventually return more prepared should a disaster event occur. Officials also point out that the program would benefit the local community as well by mobilizing inmate labor forces as supplemental manpower for disaster activities.

There have also been examples of private organizations or businesses hiring inmate work crews for hazard mitigation activities in order to save money, such as the example discussed above in which BP used inmate labor forces for oil clean up in 2010 (Dicus and Scott 2006). In another example, when one neighborhood in Southern California did not meet the standards government-led wildland fire protection, the neighborhood association hired inmate work crews after learning this would be cheaper compared to local civilian contractors. The male inmates worked to remove brush and other fuel from this neighborhood. Later, female inmates sprayed herbicide on remaining fuel and subsequently removed the dead vegetation from the neighborhood. Leaders from the neighborhood association later expressed concern over increased demand. Specifically, the success of the inmate crews combined with their cheap cost made them increasingly popular across the area, and thus not as easy to attain in a timely manner (Dicus and Scott 2006).

METHODS AND DATA

Research Questions

The above literature review shows that inmates were historically viewed as source of cheap labor and continue to function as such within American industry. Anecdotally, inmate labor forces have functioned as a resource in responding to disasters by governments and private organizations. This thesis expands this limited literature to understand how inmates are perceived and used within emergency management in the U.S. Because emergency management agencies at the state level are responsible for developing and maintaining comprehensive emergency response and recovery plans tailored to the unique hazards faced by each state, these plans provide an opportunity for analysis of the role inmate labor forces play in the response and recovery efforts of a disaster. My research questions are thus: *How common are inmate labor forces included as a response and recovery resource within state-level emergency operations planning across the U.S. and are there meaningful differences that predict which states include inmate labor forces as an emergency management resource compared to states that do not?*

Additionally, there exists a breadth of diverse voices within the academic literature that invoke qualitatively different identities and characterizations of inmates. There are those who define inmates as necessary labor resources to be commandeered not only for industry but also for disaster response and recovery activities. There are those who perceive inmate populations as a threat or a source of constant risk, and there are others who perceive inmates as a vulnerable population that is in need of protection particularly in the event of an emergency or disaster. In response to the inconsistencies within the literature in regards to the identities of inmate populations, I also ask: *What identities of inmate populations do state-level emergency planning invoke and are there meaningful differences that predict which identities are invoked?*

Data

This research is a content analysis of state-level planning documents related to emergency management and corrections agencies. To gather the full understanding of inmates in disaster contexts, I analyzed emergency planning documents available from state emergency management departments. I attempted to gather documents from all 50 U.S. states, and was able to get documents from 47 (94 percent) of the states. Of the 47 states analyzed, 43 release their complete planning documents to the public, most typically online. Data for 4 states, New Hampshire, North Dakota, South Dakota, and Maine were obtained through correspondence with representatives of their state emergency management department in which they disclosed whether or not their emergency management planning documents listed inmates as a labor resource as well as the types of activities inmates were responsible for. However, because their full plans could not be analyzed they are included in the analysis of the use of inmate labor forces but not in the analysis of identities invoked with planning documents. The states of Delaware, Tennessee and New Jersey do not made their most recent complete plans available to the public and are not included in either analyses. See the appendix for a list of planning document analyzed by state.

Documents analyzed include Emergency Operations Plan (EOP), which are the central planning document for emergency management. EOPs describe overall emergency situations with hazardous potential that may arise within each state, the populations which may be affected, and the coordination of responsibility of various government and nongovernmental institutions to response as well as the various resources required by emergency management to coordinate and carry out an effective response to such emergency situations. Several plans included have different but similar titles, such as Emergency Response and Recovery Plan or Emergency

Response Framework, however each plan analyzed represents the central emergency planning document of that state. Plans are modeled after the National Response Framework and typically include a base plan as well as detailed annexes further describing resources to be deployed and delineations of authority to carry out specific emergency support functions (ESFs) such as transportation, communication, mass care, etc. as well as incident specific annexes (e.g., wildfire, flood, severe winter weather).

To determine what may predict use of inmates in emergency management, I collected other state-level data related to corrections operations and disasters (Table 1). Other state-level data used within this analysis includes the frequency and type (e.g., fire, flood, storm) of federally-declared emergency and disaster events for each state since the year 2000 and throughout the history as provided by the Federal Emergency Management Agency (FEMA). Rates of total incarceration, rates of minority incarceration per 100,000 state residents, as well as levels of capacity of state prisons at the end of 2014 were obtained from reports provided by the Bureau of Justice Statistics (2016). The total expenditure of state corrections departments in the year 2014 were obtained from a state expenditure report provided by the National Association of State Budget Officers (2015). The money states spent per inmate in the year 2010 was gathered from the Vera Institute of Justice (Henrichson and Delaney 2012). The political party of each state was determined according to the presidential election results of the year 2012 made available by the Federal Election Commission (2013). Persons under the supervision of territorial prisons, military facilities, and jails on Native American Reservations are beyond the scope of this analysis.

TABLE 1. INDEPENDENT STATE-LEVEL VARIABLES

2000	• Declared disasters or emergencies in the state since the year 2000 (FEMA).
History	• Declared disasters or emergencies in the state throughout history.
Region	• Geographical regions according to the U.S. Census (South, West, Northeast, Midwest).
Total Incarceration	• Rate of incarceration general population per 100,000
White Incarceration	• Rate of incarceration of white population per 100,000.
Black Incarceration	• Rate of incarceration of black population per 100,000.
Hispanic Incarceration	• Rate of incarceration of hispanic population per 100,000.
Total Expenditure	• Total expenditure of Corrections in millions.
Cost of Prisons 2010	• The cost of maintaining state prisons in year 2010.
% Capacity	• Number of inmates in facilities compared to maximum number facilities designed to hold.
Political Party	• How states voted in the 2012 election.

Data Analysis

Plans were analyzed using the qualitative analysis software, Atlas.ti. I coded the documents both quantitatively and qualitatively. For a more structured coding strategy, I first auto-coded each plan for keywords explicitly relating to the Department of Corrections, inmates, hazardous behavior, and references to vulnerability (Table 2). Phrases and terms that were identified as possible indicators of references to the Department of Corrections or corrections institutions were entered into Atlas.ti, and the program flagged each phrase or term.

TABLE 2. VARIOUS TERMS USED TO CONDUCT QUANTITATIVE AUTO-CODING OF PLANNING DOCUMENTS

Department of Corrections	Inmates	Hazardous Behavior	Vulnerability
<ul style="list-style-type: none"> ➤ Corrections ➤ Prison ➤ Jail ➤ Institution ➤ Penal ➤ Public Safety 	<ul style="list-style-type: none"> ➤ Inmate ➤ Incarcerated ➤ prisoner 	<ul style="list-style-type: none"> ➤ Riot ➤ Escape ➤ Hostage ➤ Security 	<ul style="list-style-type: none"> ➤ Evacuation ➤ Protection ➤ Safety ➤ Special ➤ Functional Needs

I then completed inductive coding for identities of inmates as: (1) inmate labor forces (ILFs), (2) a vulnerable population, or as (3) a hazard themselves, which may not have been identified through the auto-coding. All labor activities described as the responsibility of inmate labor forces were further coded in order to develop a taxonomy of the types of response and recovery activities that inmates are responsible for in the field of emergency management. References to various labor activities assigned to the Department of Corrections that relied on vague language such as manpower or work crews and failed to disclose whether or not inmates were responsible for such tasks were coded for comparison purposes only and were not coded as references to the use of inmate labor forces.

Codes reflecting descriptions of vulnerable populations include specific mentions of corrections institutions or those living in institutionalized settings as “functional needs” and/or “special needs” populations as well as any references to mandated efforts to protect inmates, particularly during emergency situations. In contrast, descriptions of special protections needed to ensure the safety of the greater public or corrections staff from hazardous behavior from inmates, such as creating riots or hostage situations, the need for extra security forces to maintain the operations and order of corrections facilities in the event of a disaster or an evacuation

emergency, as well as any stipulations requiring inmate labor forces to be supervised while out in the community were coded as descriptions of inmates as a hazardous population.

As described in above, other independent variables analyzed include those listed in Table 1. I used descriptive statistics to compare states that include the use of ILFs in their planning documents to states that do not include mention of ILFs.

RESULTS

Identities Invoked

Because of the increasing attention on inmate populations as vulnerable, it would be expected that a large portion of states would include inmates within their definitions of vulnerable populations or reflect practices to protect them during a disaster event. It would also be expected that because of the emphasis on inmates as a hazard within corrections emergency management literature, plans would also identify inmates as a hazardous population. However, this analysis did not support reflect such expectations (Figure 1).

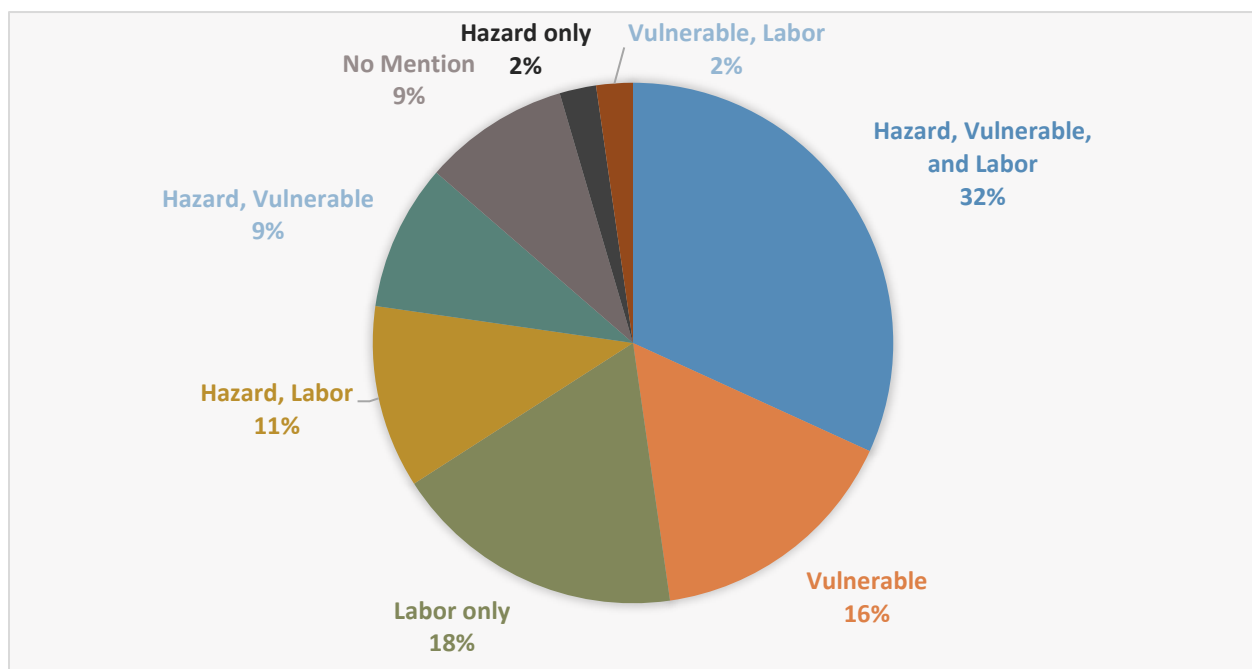


FIGURE 1. IDENTITIES INVOKED ACROSS STATE-LEVEL EMERGENCY PLANNING DOCUMENTS

The largest percent of plans (32%) invoked all three identities of inmates by identifying them not only as a labor resource, but also as a hazard, and a vulnerable population. The second largest percent of plans described inmates only as a labor resource (18%) while the third largest

percent described inmates only as vulnerable (16%). Very few plans (2%) identified inmates as a hazardous population only, with no other references to inmates as a labor resource or vulnerable population. Only 9 percent of the plans were shown to have no references to inmate populations at all.

A Taxonomy of Inmate Labor Activities

Within the various plans, 17 different emergency response and recovery activities were found to be explicitly assigned to inmate labor forces. The number of tasks described ranged from one task to eleven tasks. While there is a diverse set of activities, the average number of tasks explicitly described as the responsibility of inmate labor forces across the states analyzed is only 2.60 tasks (as shown in Table 3 below). However, this number likely is likely underestimated as emergency management departments are not required to list or describe the various tasks which inmates are responsible for. While some states included detailed information for the kind of work inmates would be used for, others included only very general acknowledgements that inmate labor would be used. Within my taxonomy I have further categorized tasks as they pertain to manual labor, hazardous labor, and service activities. Results demonstrate that the majority of tasks assigned to ILFs are labor-intensive, hazardous by nature, and supplement valuable services and resources within the community during a disaster.

TABLE 3. DESCRIPTIVE STATISTICS OF TASKS ASSIGNED TO ILFs

DESCRIPTIVE STATISTICS					
ILF Tasks	N	Minimum	Maximum	Mean	Std. Deviation
	30	1	11	2.60	2.27

The labor intensive manual activities inmates participate in during a disaster include: debris cleanup and emergency route clearance, construction work, flooding preparation (sandbagging), farming, loading and unloading of supplies, seismic retrofit activities, and vegetation abatement/arboreal (tree) removal (Figure 2). The most common manual labor task described is debris cleanup (36%) followed by construction and the handling of supplies (both 11%). The least commonly described task is seismic retrofitting, only described by the state of California. If taken at face value, it seems that most of the manual labor tasks do not appear to require a great amount of skill or expertise, however construction work as well as seismic retrofit activities (construction activities to make a structure more stable in the event of an earthquake) require a diverse skillset as well as training.

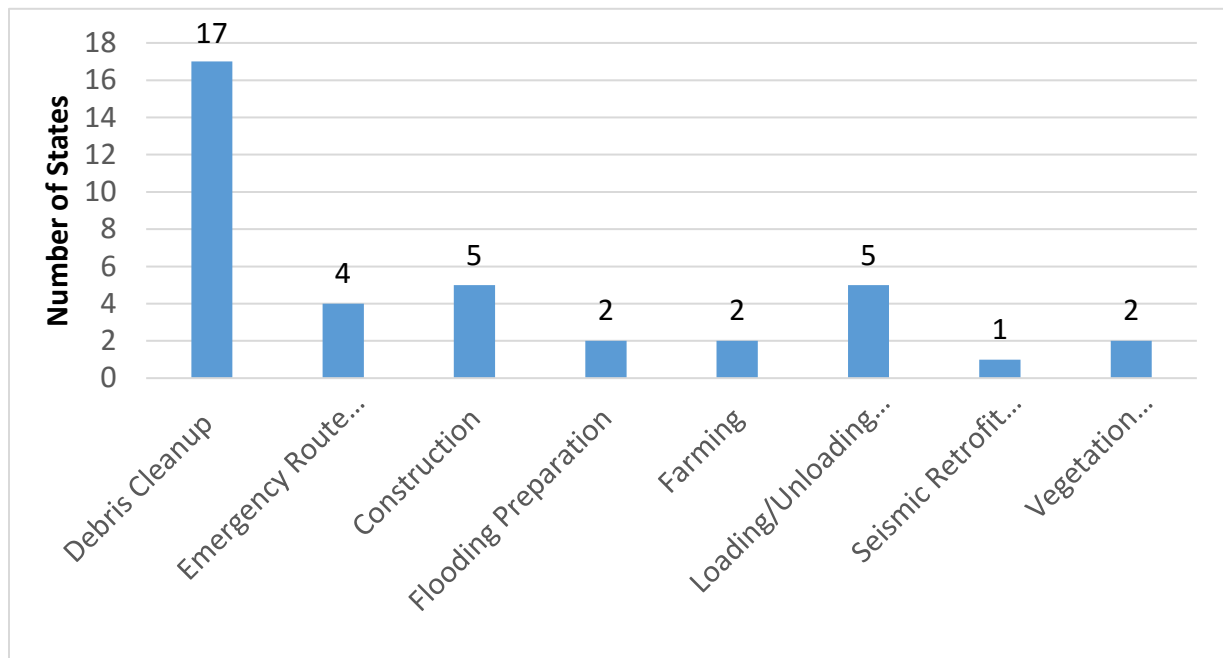


FIGURE 2. MANUAL LABOR TASKS FOR ILFs IN EMERGENCY SITUATION

Hazardous activities include firefighting, hazardous materials cleanup (such as oil and chemical spills), decontamination activities, disposal of animal carcasses both contaminated and non-contaminated, and citizen evacuation assistance (Figure 3). The most commonly described hazardous tasks assigned to inmates is fire-fighting (22%). These activities are categorized as hazardous due to the inherent physical risk to an individual's life or health required of those participating in such tasks. Such tasks require a skill and training to prevent negative health impacts or even loss of life due to their hazardous nature. Citizen evacuation assistance is described as a hazardous task as opposed to service-oriented because it requires prolonged time spent in hazardous areas such as disaster zones and therefore can be characterized by an exposure to potentially life-threatening risk.

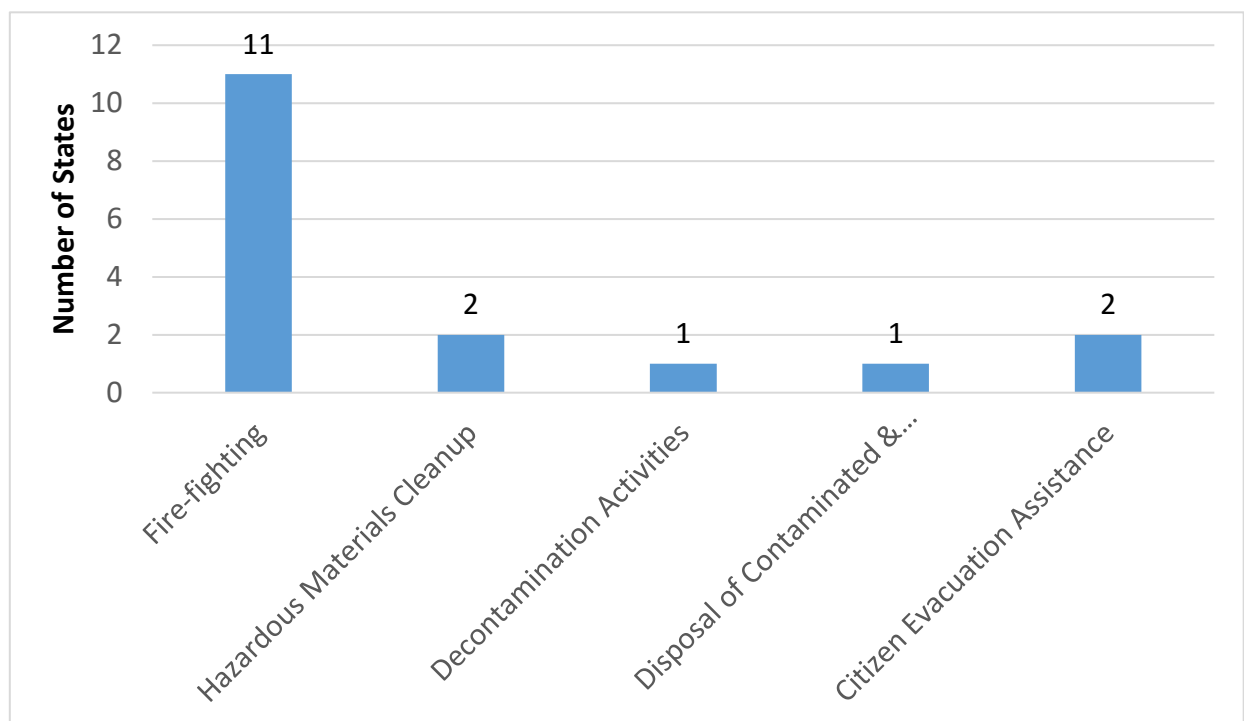


FIGURE 3. HAZARDOUS LABOR TASKS FOR ILFs IN EMERGENCY SITUATIONS

Service oriented tasks include providing corrections industries products, laundry services, animal care, and mass feeding operations (as shown in Figure 4 below). Corrections products are provided through manufacturing operations producing any items for response and recovery operations that are already generally provided through that particular department of corrections industries program. Laundry services provided by inmates within their corrections facilities would serve emergency responders and/or displaced victims. Animal care may pertain to domestic animals of those displaced by a disaster as well as possibly caring for displaced livestock such as cattle or chickens. Mass feeding operations are unique among services tasks as such operations would likely bring inmates into contact with community members while operating mobile feeding kitchen units.

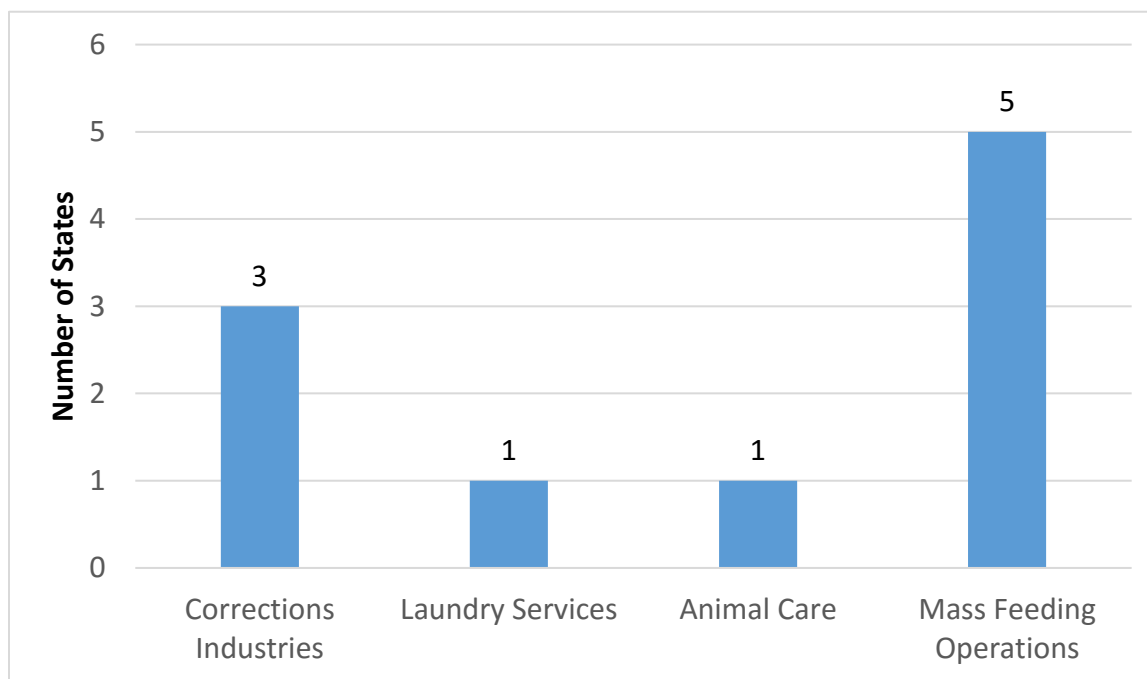


FIGURE 4. SERVICE-ORIENTED LABOR TASKS FOR ILFs IN EMERGENCY SITUATIONS

It is likely that each task occurs more commonly than reflected within the analyzed plans as there is no requirement by law for the emergency operations plan to describe in detail the

various labor tasks assigned to inmates during an emergency or disaster event. Additionally, the majority of tasks place inmates outside of the confines of corrections facilities and out within local communities as they participate in preparation, response, and recovery activities necessary should a disaster or emergency event take place. Only two states, Nevada and Washington, describe the security level (minimum security) of their deployed inmate labor forces within their state plans, while only one state, Pennsylvania, described their inmate labor forces as voluntary.

The Use of Inmate Labor Forces

Of the 47 states examined for the use of Inmate Labor Forces, 30 (64%) explicitly describe utilizing ILFs in emergency response and recovery activities as dictated by their state-level emergency operations plan. These states include: Alabama, Arizona, Arkansas, California, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Virginia, Washington, West Virginia, and Wisconsin. To understand variation in the use of ILFs, I analyzed region, disaster experience, and incarceration rates, rates of capacity, cost of state prison operations, total corrections expenditures, and party politics of each state in the analysis.

Region

Region may affect use of ILF due to the historical legacy of slavery, which has been connected to the growth of incarceration and use of inmate labor. Thus, we would expect that Southern states would be more likely to use inmate labor in disaster. Regional differences did reflect that states in the Southern region make up the largest percent of states (37%) explicitly mentioning use of ILFs within state-level emergency planning, over double states from the Northeast (Figure 5). After the South, the next highest region using ILFs is the Midwest (30%).

By comparison the Western region (20%) and the Northeastern (13%) region both had lower numbers of states utilizing ILFs.

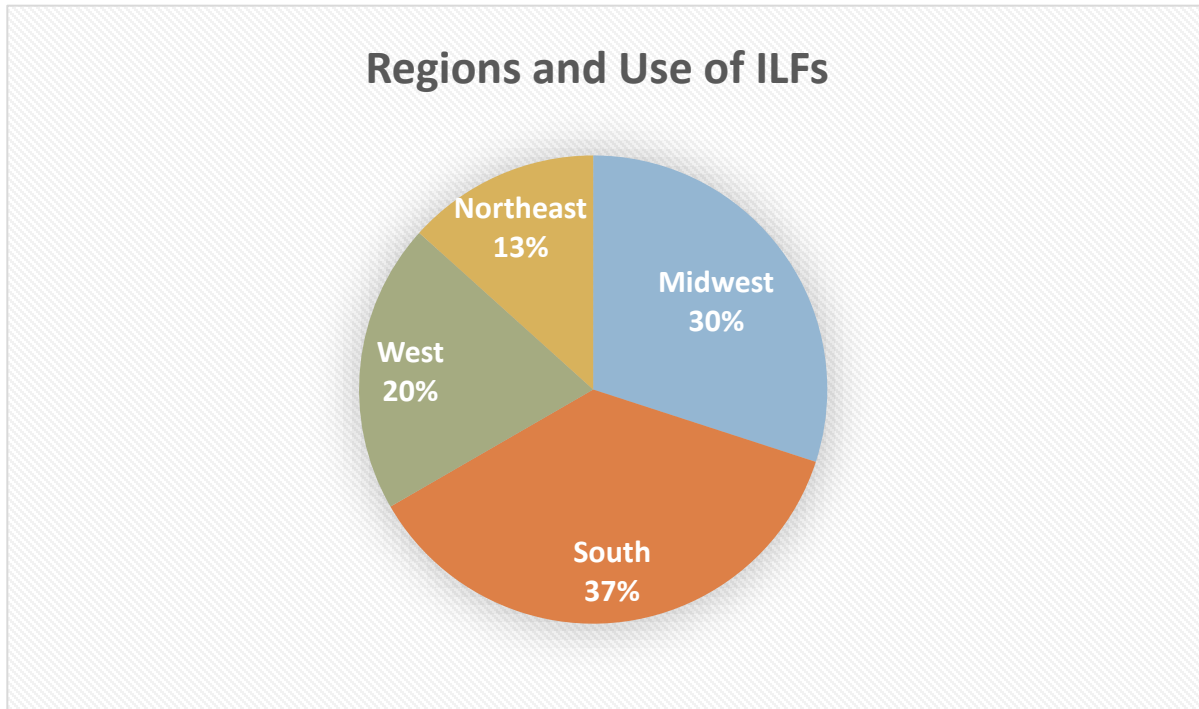


FIGURE 5. REGIONAL DIFFERENCES IN UTILIZATION OF INMATE LABOR FORCES

An examination of the ratio within each region reflects a similar pattern of results (Figure 6). The southern region (79%) has the highest percentage of states utilizing ILFs as opposed to those that don't, followed by the Midwest region (67%), with the Western (50%) and Northeastern regions (44%) (as shown in Figure 6 below). While the Southern region has the largest number and proportion of states utilizing ILFs, the Midwestern region is not far behind. More analysis is needed to understand what why they differ from the Northeastern and Western regions.

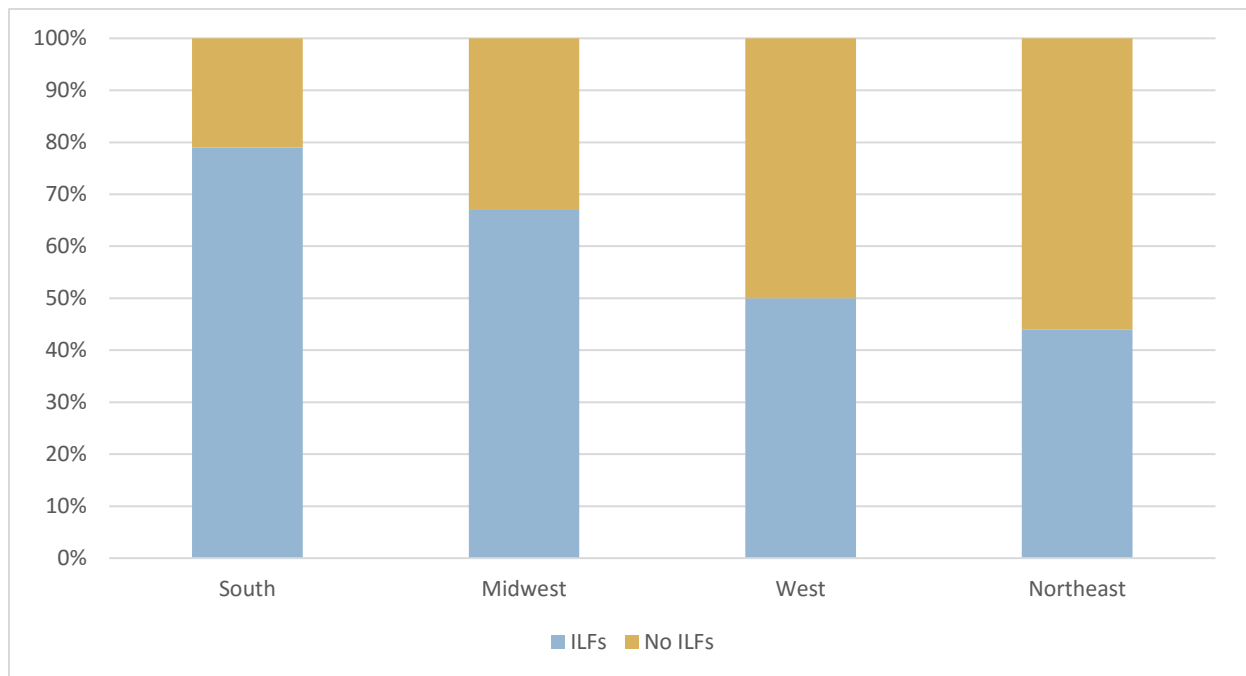


FIGURE 6. REGIONAL RATIOS OF STATES UTILIZING ILFs AND STATES NOT UTILIZING ILFs

Disaster Experience and Type

It is possible that the use of ILFs in emergency management relate to the disaster experiences of the state. If a state has experienced a higher number of disasters, they may be more likely to look for and rely upon an easily accessible and cheap source of labor such as inmate populations. Thus, I compared states that use ILFs to the other states based on three indicators of disaster experience: number of federally declared disasters since the year 2000, the total number of federally declared disasters, and the most common type of disaster event experienced (Figure 7). Federally-declared disasters are emergency events that are determined to be beyond the capacity of local and state governments to respond to, and thus generate federal support through FEMA. My findings provide some support to this proposition. States using IFLs for emergency response and recovery activities were found to have had, on average, four more federally-declared disasters since the year 2000 compared to states not utilizing ILFs.

Throughout the history of federally-declared disasters, states utilizing ILFs had on average 14 more of these events than states not utilizing ILFs.

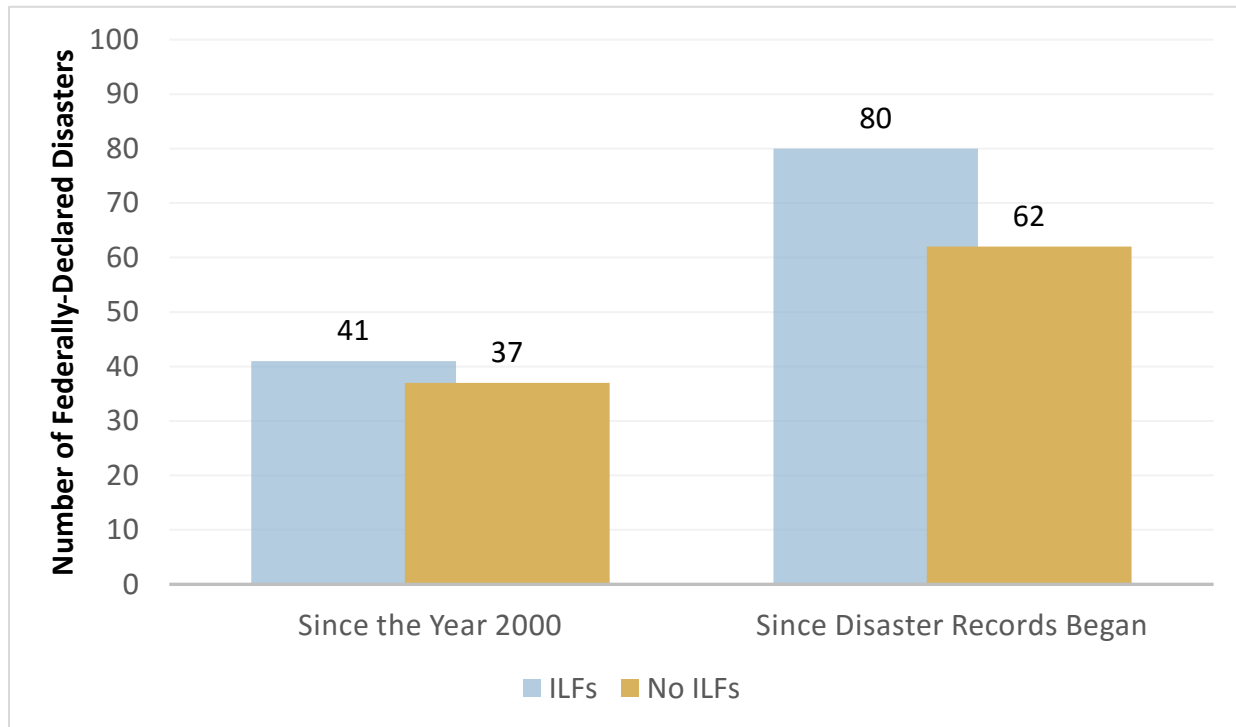


FIGURE 7. DISASTER EXPERIENCE AND THE USE OF ILFs

The above data includes all types of disasters, but it is possible that there is a connection between a state's most common type of disaster experienced and the role of inmates in emergency planning. The most common disaster for states utilizing inmate firefighters is wildfire events (46%) (as shown in Figure 8 below). This result indicates not only that the use of inmate labor forces in emergency response and recovery activities may be influenced by each state's experiences with disasters, but also the kinds of activities inmates participate in may be determined by disaster type and frequency.

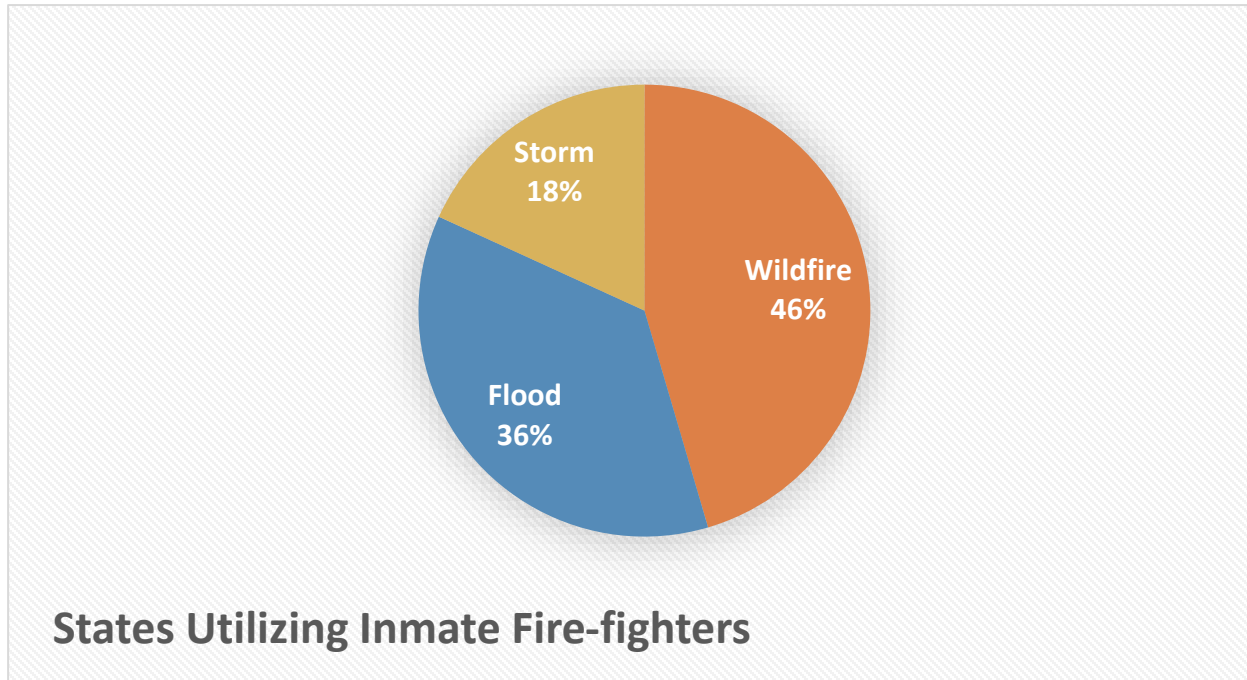


FIGURE 8. MOST COMMON DISASTERS AND THE USE OF ILFs FOR FIREFIGHTERS

Incarceration Rates

The utilization of ILFs during a disaster may be a reflection of how entrenched inmate labor is within the economy of each state. If the practice is creating further incentive to incarcerate higher total numbers of persons, as well as higher proportions of minorities, we would expect that states utilizing ILFs would have higher rates of incarceration. Findings support this proposition (Figure 9). States utilizing ILFs had higher proportional rates of total incarceration as well as rates of incarceration of white and black populations, but nearly the same proportional rate of incarceration for Hispanic populations. States utilizing ILFs had a total incarceration rate of 411 persons per 100,000 residents, compared to states not utilizing ILFs at 355 persons per 100,000. In regards to race, states utilizing ILFs had higher proportional rates of incarceration of white persons with 297 persons per 100,000 compared to 250 persons per 100,000 residents. States utilizing ILFs also had higher rates of incarceration of black persons at

1,537 persons per 100,000 compared to 1,373, but only a difference of three persons for Hispanic persons at 314 persons per 100,000 for non-ILF states compared to 317 persons per residents 100,000 for ILF states.

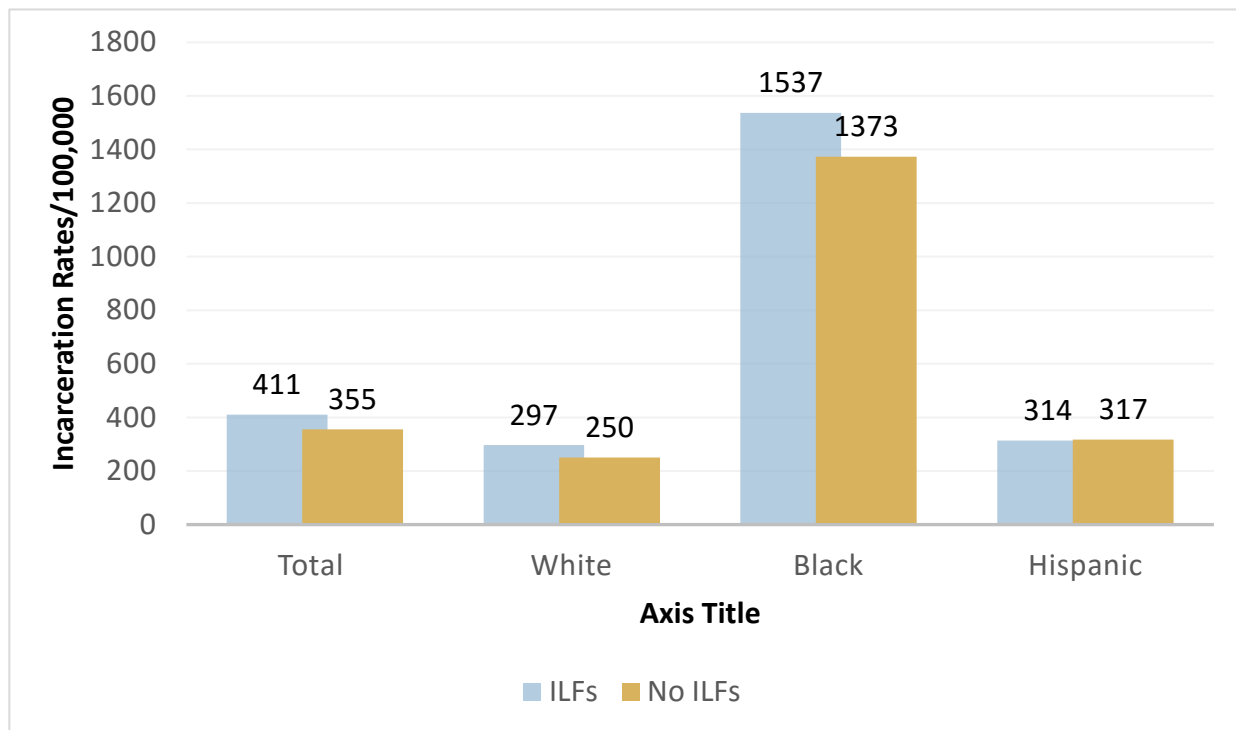


FIGURE 9. INCARCERATION RATES AND THE USE OF ILFS

Rates of Capacity

Whether or not the state's overall prison system is operating at or above capacity is vital to the discussion of the use of inmate labor forces as it speaks to the likelihood of whether or not that state has the resources to adequately care for and protect inmate populations in general, let alone in the a disaster zone or emergency context. Scholars have also shown that states rely on sending out inmates into the local work force as a strategy to address issues like over-crowding and a lack of resources. Of the states utilizing inmate labor forces in the context of disaster

response and recovery operations, more than a third (31%) are above the pre-established threshold of capacity for their prison system (Figure 10).

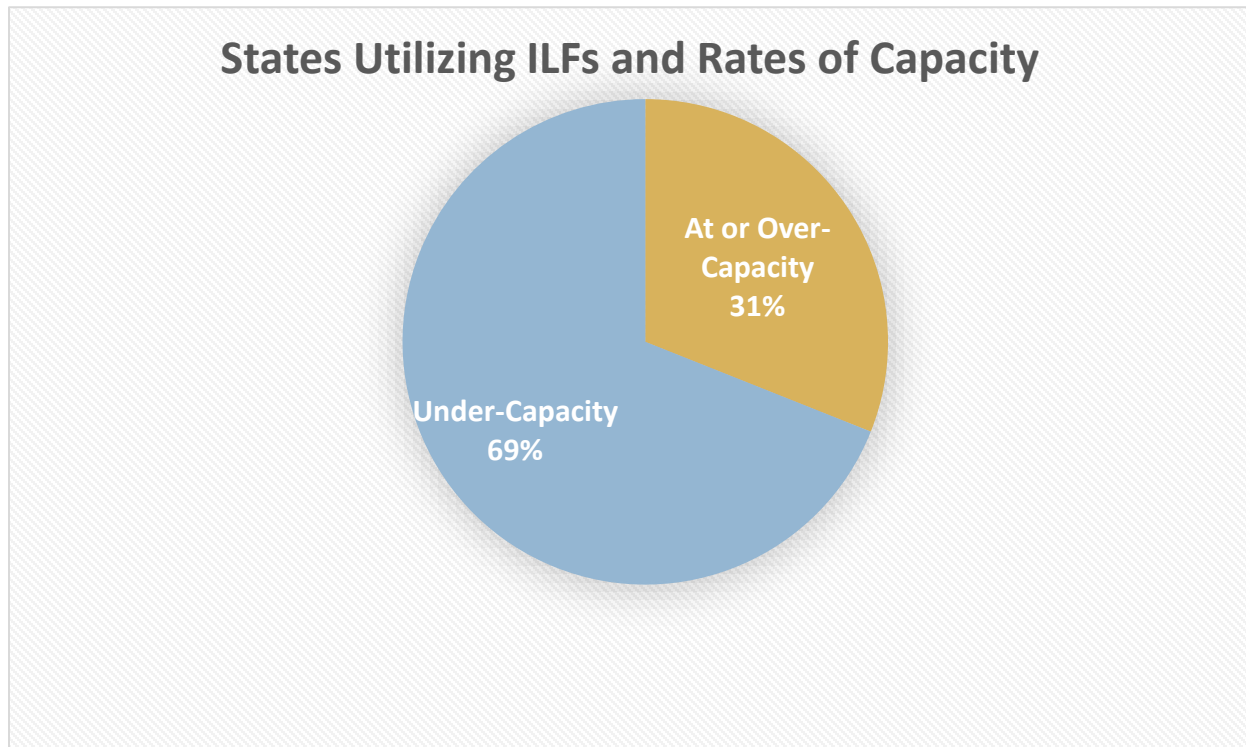


FIGURE 10. RATES OF CAPACITY AND THE USE OF ILFs

State Prison System Expenditure and Corrections Expenditures

A common argument to justify the use of inmates as a labor resource is that it lowers operational costs of the prison system. Therefore, we would expect that states utilizing ILFs in disasters would have lower costs of prison operations. Results reflected below in States that were shown to use ILFs spent on average \$1,116,136 to operate their state prison systems in 2010, nearly \$500,000 more than states that did not explicitly describe using ILFs for disaster response and recovery activities, who spent on average \$886,651 to operate their prison systems. States utilizing ILFs had an average total corrections expenditure of \$1,345,470, nearly double the expenditure of states that did not include the use of ILFs in their state-level planning, who had an

average expenditure of only \$687,350 (Figure 11). This finding suggests that the use of inmate labor forces may save costs initially during a short-term disaster event, however the over-all costs of operating the prison system may cause the state to outspend any savings provided by that inmate labor as operations and total expenditures of the corrections system continues to increase.

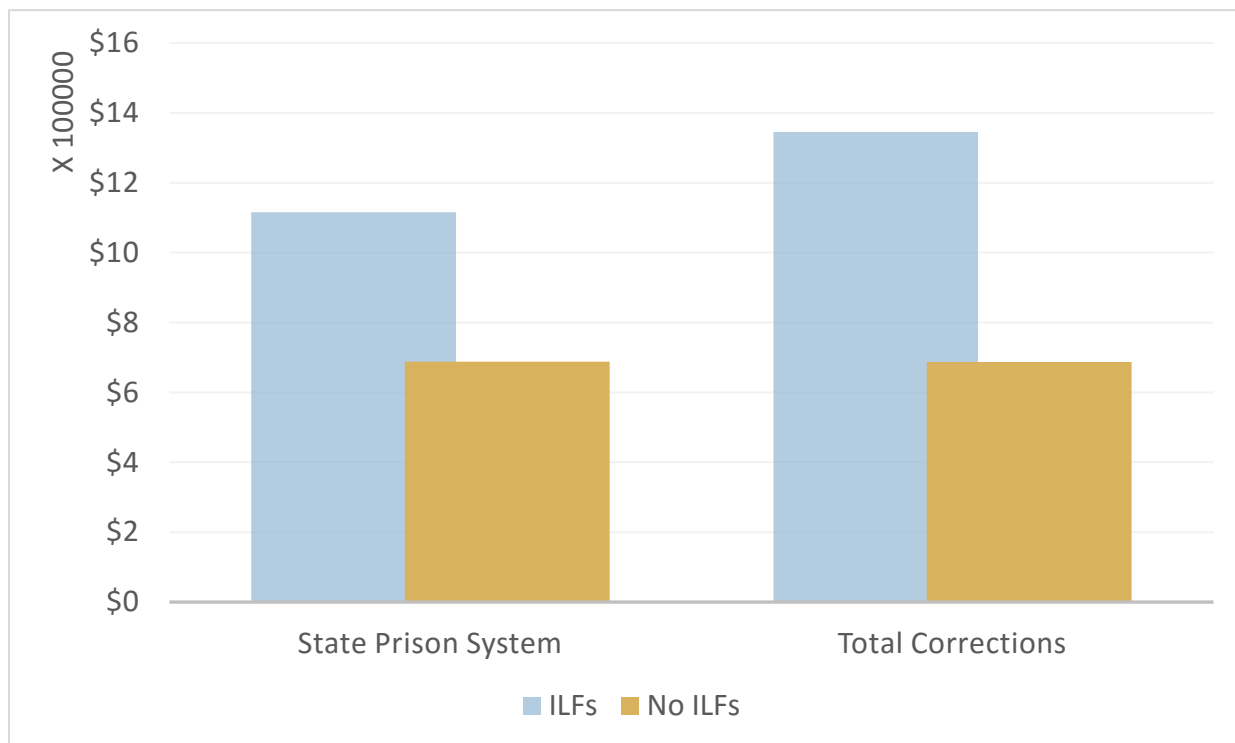


FIGURE 11. STATE PRISON SYSTEM AND TOTAL CORRECTIONS COSTS AND USE OF ILFs

Party Politics

It is possible that party politics may also have a measure of influence in determining whether or not a state utilizes inmate labor forces in the disaster context. An analysis of the party politics of states, a reflection of how each state voted in the 2012 presidential election, revealed no differences between the proportion of Republican states utilizing ILFs (15) and Democrat states utilizing ILFs (15) or between Republican states not utilizing ILFs (8) and Democrat states not utilizing ILFs (9) (Figure 12). This finding supports what scholars have long suggested in

that mass incarceration and the prison industrial complex was created and sustained by bi-partisan policy.

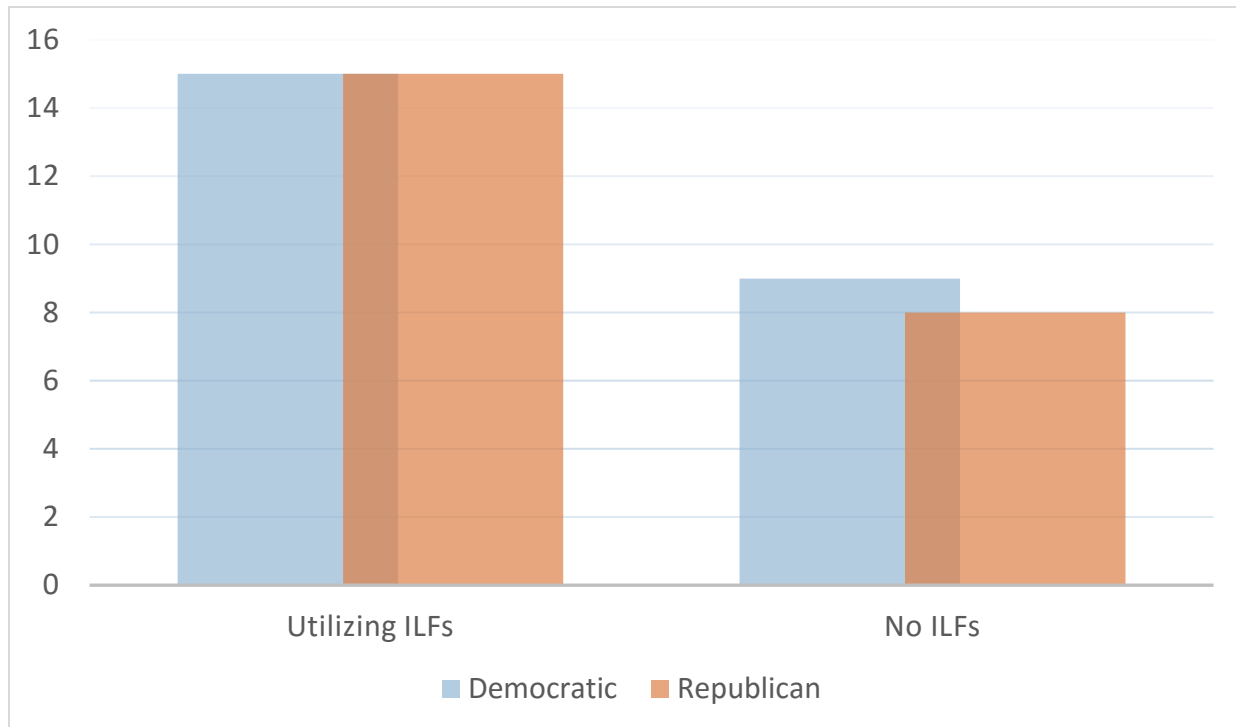


FIGURE 12. PARTY POLITICS OF STATES AND USE OF ILFs

However, as shown in the figure below (Figure 13), when examining regional political differences, there does seem to be some relationship between politics and the use of ILFs. Regions with a higher percentage of Republican states have a higher percentage of states utilizing ILFs, while the regions with the lowest percentage of states utilizing ILFs have a higher percentages of Democrat states. This finding suggests there may be a relationship between regional politics and the use of inmate labor forces in the disaster context. Further data collection and analysis, perhaps with smaller geographical units of analysis such as counties may be better able to speak to that relationship.

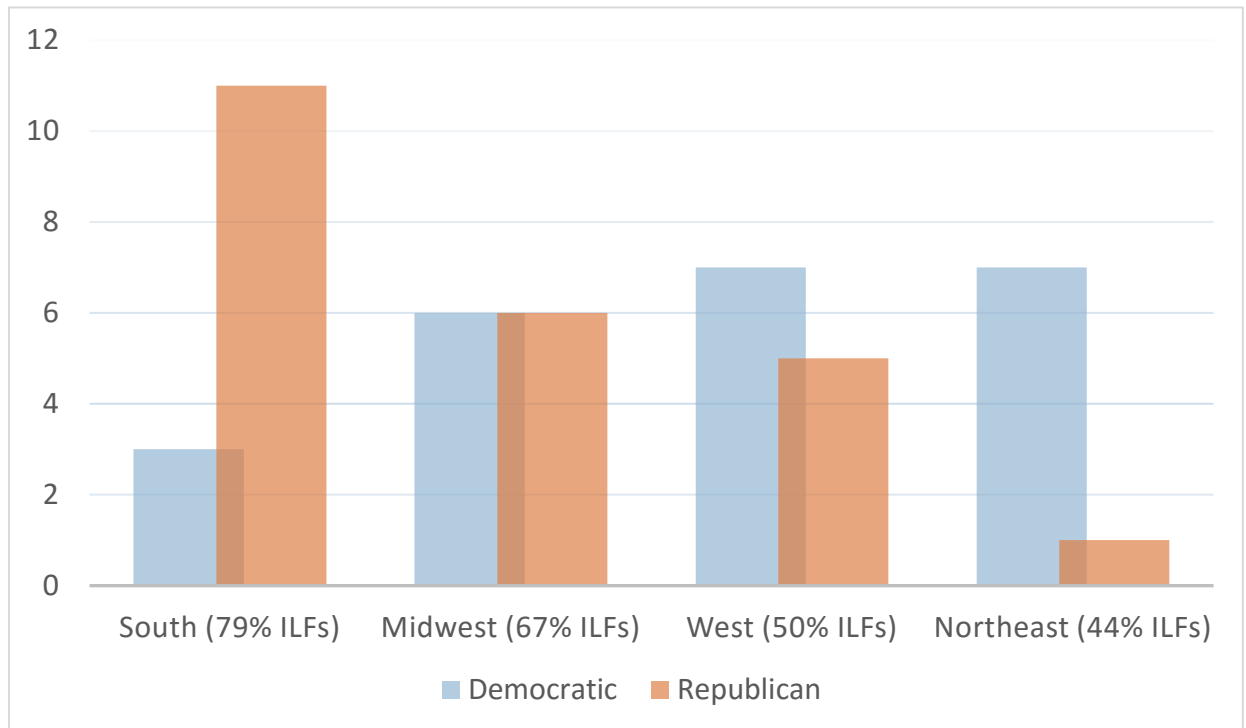


FIGURE 13. REGIONAL DIFFERENCES OF PARTY POLITICS AND USE OF ILFs

DISCUSSION

The results of this analysis of state-level emergency planning documents contributes the nascent literature on inmates in disaster. Several important conclusions can be drawn from these results. First, the analysis of the different identities of inmates invoked by emergency management reveal that there is no consensus as to whether or not inmates are a vulnerable population, a hazard, or an inmate labor resource. The largest majority of plans support this conclusion, as they invoked all three of the identities of inmates: labor resource, vulnerable population, and hazard. The next two largest majorities referred to inmate populations only as a labor resource or a vulnerable population. A sizeable minority of states did not refer to inmates at all in their plans at all, which may or may not be reflective of actual practice. The various identities of inmates seem to conflict, which should prompt us to ask several questions about the role of inmates within the disaster context. First, if inmates represent a hazard to the general population, should inmates be acting as emergency responders in the community? Should their activities during a disaster be restricted by policy? If inmates are a vulnerable population, whose rights must be rigorously protected in the context of disasters, should they be acting as a source of labor resource in the emergency and disaster context, especially labor that may place them in harm's way?

The results also reflect that inmates are most commonly used as a source of unskilled manual labor during a disaster. This finding indicate that state emergency management may perceive inmates as a large, easily accessible, and cheap labor force to prepare for, respond to, and recovery from a disaster. However, inmates also participate in hazardous activities that expose them to elevated risk for loss of life as well as negative health impacts, which raises questions as to how the rights of inmates are protected in the disaster context. Such activities

require a breadth of resources for health protection as well as extensive training to minimize impact to the responder's health and safety. Are inmates provided such resources and training? There is no ability to know from these plans what training or access to protective equipment is provided for inmates involved in hazardous activities. In order to address such questions and ensure the rights of inmates, primary data is needed.

These plans may demonstrate an absence of concern for the civil rights of inmates, and perhaps even grounds to argue that being used as a labor resource during a disaster constitutes a violation of their constitutional right to not be subject to cruel and unusual punishment. To prevent such a scenario, stringent policies should be in place and be rigorously adhered to, however the absence of any mention of such protections within state-level planning may serve to create or even be a product of, an atmosphere within emergency management that views inmates only as a labor resource, and not as citizens for which it is the responsibility of the state to protect.

Because of how dangerous the public generally views inmates, reinforced by the emphasis on inmates as a hazard and risk within corrections emergency planning, it was unexpected to find that after a disaster, inmates participate in direct service activities such as mass feeding operations or that of assisting with citizen evacuation, which likely put them in direct contact with victims after a disaster. This practice begs the question, if inmates are dangerous and hazardous, can they be trusted to be working in close proximity to victims in a disaster? Does this practice put communities at risk? However, if inmates do not pose a risk to the communities to which they respond to, and are contributing to society in a positive way by acting as first responders, who are regarded as heroes throughout the nation, how does this transition to future jobs once these inmates are released? A common argument for those that

support inmate labor, is that it provides job training and reduces recidivism. However, there is an absence of any data to validate such an argument. If inmates are providing skilled services in the event of a disaster such as hazard mitigation (e.g., seismic retrofitting) and construction, or serving as first responders during a disaster by assisting the evacuation of citizens and serving as firefighters, there must be follow-up data collection and analysis as whether or not inmates are hired as first responders and can use this training once they reenter the community.

Based on this analysis of state-level emergency operations plans, the practice of utilizing inmate labor forces for emergency response and recovery activities is common among the majority of states. These results reflect a much larger proportion of states relying on inmate labor in disasters compared to the findings of the only other national survey on the topic. As discussed above, the only other study, sponsored by the Department of Justice and the National Institute for Correction, reported that only 44 percent of the 34 states surveyed reported their inmates were trained to respond to the community in an event of a disaster.

In an effort to inform future research, descriptive results serve to create a profile of the various states utilizing ILFs, as well as to suggest variables that should be analyzed with comprehensive primary data. States in the Southern and Midwestern region were most likely to report utilizing ILFs, and larger proportions of their total regions reported utilizing ILFs. In light of the legacy of slavery predominantly in the South, the use of ILFs in disasters may be an outcome influenced by historical and foundational labor policies and practices such as the use Thirteenth Amendment, which provided for forced labor provided by persons convicted of any crime. Regions such as the South and the West both have higher proportions of traditionally Republican states compared to regions such as the Midwest and Northeast, which comparatively have a higher proportion of states which traditionally have voted Democrat. This finding may be

a reflection of how various politics form social and economic policies pertaining to inmate populations. However, when examining only party politics, there were no differences between the proportion of Republican and Democrat states utilizing ILFs and not explicitly utilizing ILFs. This finding suggests that the use of ILFs in disasters, much like scholarly discussion of mass incarceration and the prison industrial complex has shown, may have bi-partisan policy support, and thus requires a comprehensive political policy analysis.

The utilization of inmate labor forces in the disaster context may suggest a deeper level of entrenchment with regards to the extent in which states rely upon inmate labor participation in local economy, and may be serving to further incentivize higher rates of incarceration. States utilizing ILFs had higher rates of total incarceration, incarceration of white persons, and incarceration of black persons but nearly identical incarceration rates of Hispanic persons. More than a third of the states using ILFs were overcapacity at the yearend of 2014. For example, two states that utilize ILFs, Illinois and Ohio, reported operating far above their capacity limits at 150% and 132% of capacity. For state prison systems that are over-capacity, sending inmates out into the labor force within the community may be serving to take some of the physical pressure of the over-crowded and under-resourced corrections institutions. However, this finding also begs the question, if state prison systems are over-crowded and do not have the adequate resources to care for the inmates under their provision, should they be sending inmates out into the community to respond to vulnerable people in vulnerable communities? Does the state have the resources to protect and ensure the rights of inmates? Or the right of communities to be safe from the potential hazards of inmate populations if they are indeed hazardous? Does this open up states to legal repercussions? It is also worthy of note, that states utilizing ILFs are not spending less on corrections. While utilizing such a large unit of analysis such as states may not be

reflecting the financial outcomes of the practice, these findings suggest that the practice may in fact be costing states more in the long run as having a large, accessible, and cheap inmate labor force costs an enormous amount of resources to maintain. Further analysis of primary data should further examine the economic impact of the practice on state budgets and private corporations involved in overseeing corrections facilities. This result also indicates that spending on disasters should include amounts spent from department of corrections, which would increase the ever-rising price of disasters in the U.S.

There is evidence to support the claim that utilizing inmate labor as a substitute for emergency responders provides further incentives for states to pass harsher penal policies or to refrain from reforming past harsh policies, though much more research is needed. In November of 2014, California passed the controversial Prop. 47, a policy aimed at decreasing the presence of low-level nonviolent offenders in an overcrowded prison system. This policy drew backlash and criticism from many who argued the policy would reduce the number of inmates available and eligible to participate in fighting wildfires during the state's dangerous wildfire season. ("Prop. 47," 2014). Most notably, California Attorney General Kamala Harris argued against the policy out of the belief it would deplete the inmate labor force impacting the state's ability to combat wildfires. She argued the policy would produce, "a dangerous outcome while California is in the middle of a difficult fire season and severe drought" ("30 Percent," 2015).

LIMITATIONS AND FUTURE RESEARCH

As mentioned above, emergency management is not required by law to disclose whether or not they use inmate labor forces in emergency response and recovery activities or the extent to which they participate in such activities within the context of emergency planning. The intention of such documents is not to fully disclose the full extent of resources available during a disaster, but to act as a framework and guide for emergency management should an emergency or disaster occur. Other planning documents such as Memorandums of Agreement/Understanding between emergency management agencies and departments of corrections may provide more information about the extent of the use of inmate labor in disasters. Due to such limitations, it is likely that the use of inmate labor is underreported in these results. For example, as discussed in the introduction, inmates in the state of Louisiana have helped with efforts to prepare for and respond to flooding incidents by manufacturing sandbags and sandbagging structures, however I found *no mention* of inmates participating in such activities in the Louisiana emergency operations plan, and thus it was categorized as a state that does not use ILFs in these analyses (Gaillard and Navizet 2012).

Future research should include primary data in an effort to address the limitations. Primary data could be collected through interviews with state-level emergency management officials, officials representing departments of corrections, as well as present and/or former inmates. An extension of this research would be to further collect and examine planning documents such as Memorandums of Agreement/Understanding or to analyze emergency operations at the county-level or city-level.

CONCLUSION

This thesis serves to highlight an alarming lack of research and knowledge on the role of inmate populations in disasters and provides much needed insight into the likely increasing practice. This research provides support that inmates are active throughout the life-cycle of a disaster from mitigation and preparedness to response and recovery. Inmates also serve as first responders during disaster events, and yet we know very little about their experiences or the implications of their participation in such activities. Thus, future research must address the lack of primary data on the subject as well as contextualize the experiences of inmates as they serve their communities as active emergency responders.

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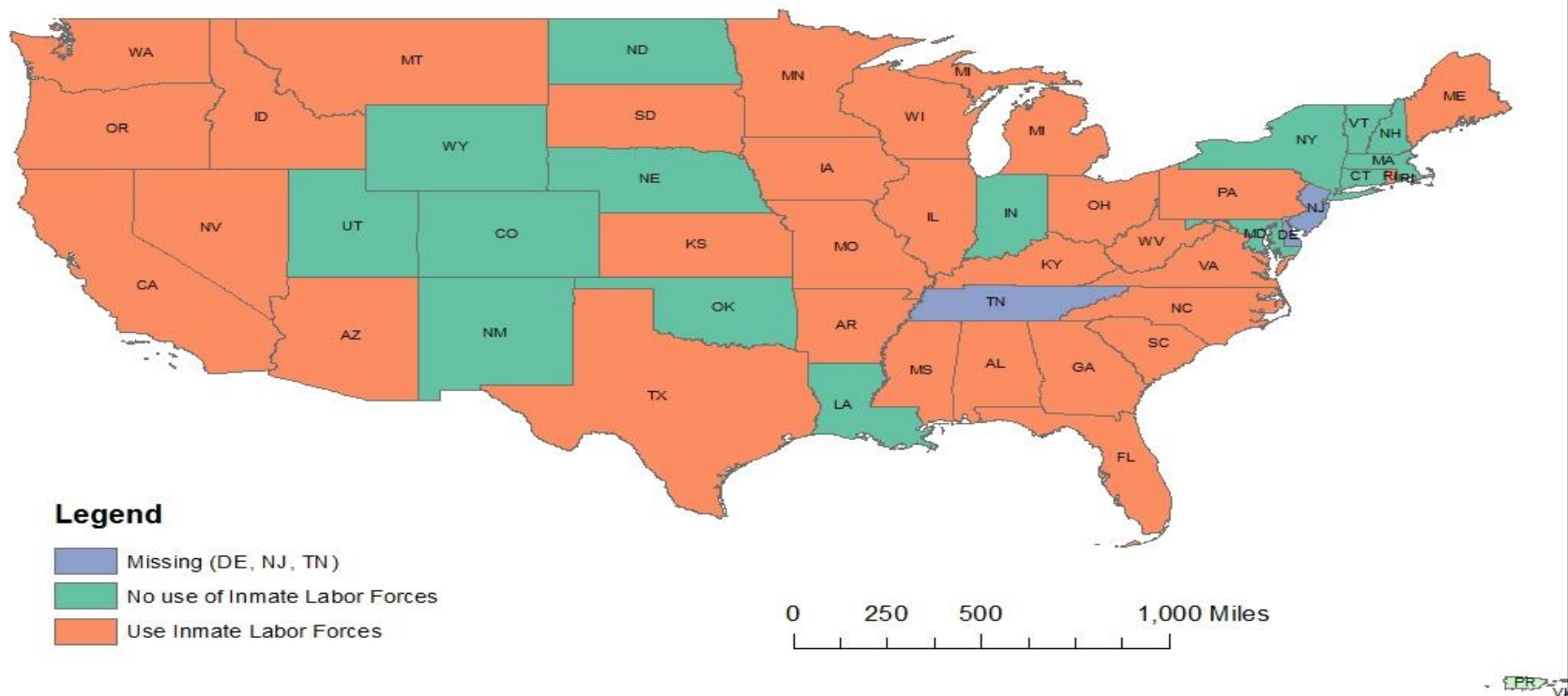
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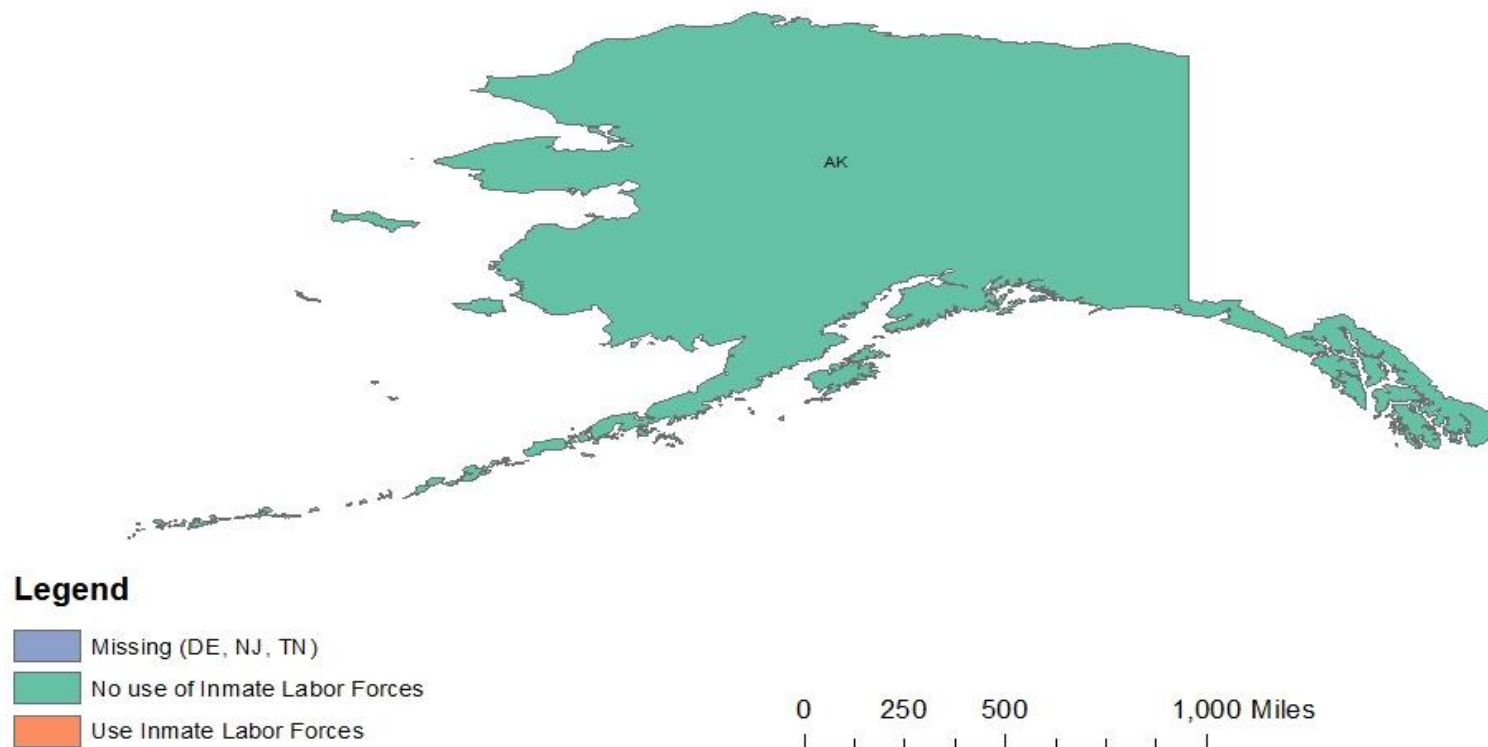
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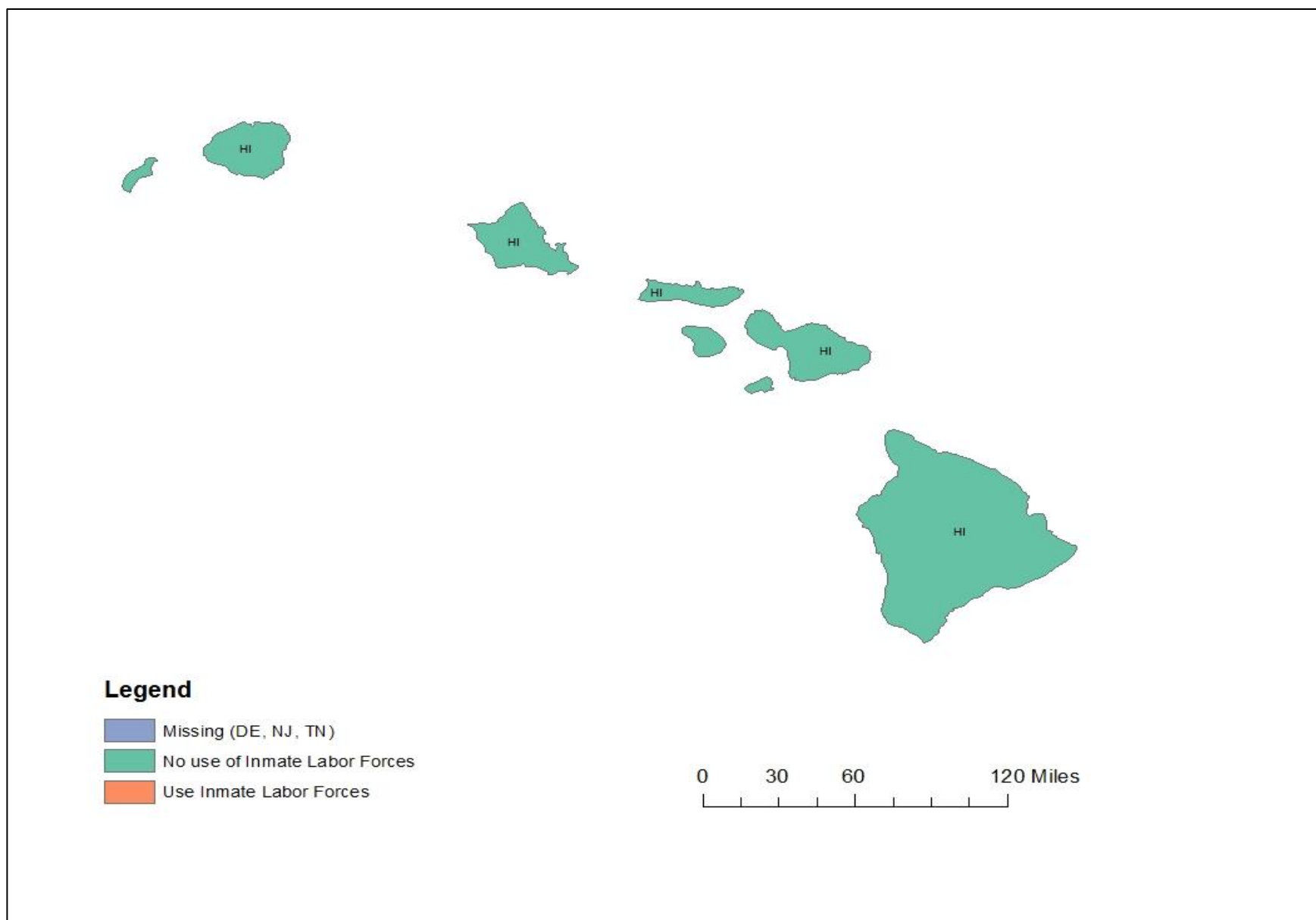
APPENDIX A. MAPS OF STATES UTILIZING ILFS

U.S. States and use of Inmate Labor Forces in Disasters



U.S. States and use of Inmate Labor Forces in Disasters





APPENDIX B. STATE EMERGENCY MANAGEMENT PLANS

Alabama	State of Alabama Emergency Operations Plan, 2012
Alaska	State of Alaska Emergency Operations Plan, 2012
Arizona	State of Arizona Emergency Response and Recovery Plan, 2013
Arkansas	Arkansas Comprehensive Emergency Management Plan, 2015
California	State of California Emergency Plan, 2009
Colorado	State Emergency Operations Plan, 2015
Connecticut	State Response Framework, 2014
Delaware	Missing
Florida	Florida Comprehensive Emergency Management Plan, 2014
Georgia	Georgia Emergency Operations Plan, 2015
Hawaii	Hawaii Catastrophic All-Hazards Plan 2009; Hawaii Catastrophic Hurricane Plan, 2015
Idaho	Idaho Emergency Operations Plan, 2015
Illinois	Illinois Emergency Operations Plan, 2014
Indiana	State of Indiana Comprehensive Emergency Management Plan, 2009
Iowa	Iowa Emergency Response Plan, 2010
Kansas	Kansas Response Plan, 2014
Kentucky	Kentucky Emergency Operations Plan, 2014
Louisiana	State of Louisiana Emergency Operations Plan, 2014
Maine	Correspondence with Emergency Management
Maryland	State of Maryland Response Operations Plan, 2015
Massachusetts	Commonwealth of Massachusetts Comprehensive Emergency Management Plan, 2007
Minnesota	State of Minnesota Emergency Operations Plan, 2013
Mississippi	Mississippi Comprehensive Emergency Management Plan, 2015
Missouri	State Emergency Operations Plan, 2015
Montana	Montana Emergency Response Framework, 2016
Nebraska	State of Nebraska Emergency Operations, 2014
Nevada	State Comprehensive Emergency Management Plan, 2014
New Hampshire	New Hampshire Emergency Operations Plan, (annexes not included) Supplemented by Correspondence with Emergency Management
New Jersey	Missing
New Mexico	State of New Mexico All-Hazard Emergency Operations Plan
New York	New York State Comprehensive Emergency Management Plan, 2016
North Carolina	North Carolina Emergency Operations Plan, 2012
North Dakota	North Dakota Disaster Procedures Guide, (annexes not included). Supplemented by Correspondence with Emergency Management
Ohio	Ohio Emergency Operations Plan, 2014
Oklahoma	State of Oklahoma Emergency Operations Plan
Oregon	State of Oregon Emergency Operations Plan, 2014
Pennsylvania	State Emergency Operations Plan, 2015
Rhode Island	Rhode Island Emergency Operations Plan, 2012
South Carolina	South Carolina Emergency Operations Plan, 2015

South Dakota	Unavailable, Supplemented by Correspondence with Emergency Management
Tennessee	Missing, Temporarily Unavailable
Texas	State of Texas Emergency Management Plan, 2012
Utah	State of Utah Emergency Operations Plan, 2013
Vermont	State of Vermont Emergency Operations Plan, 2015
Virginia	Commonwealth of Virginia Emergency Operations Plan, 2012
Washington	Washington State Comprehensive Emergency Management Plan, 2016
West Virginia	State of West Virginia Emergency Operations Plan, 2016
Wisconsin	State of Wisconsin Emergency Response Plan, 2015
Wyoming	Wyoming Response Plan, 2008

VITA

Jordan “Carlee” Smith, a native of Rockwall, Texas, received her Bachelor’s degree in Psychology from Baylor University in 2014. After working as a research assistant at Baylor’s Center for Community Research and Development, she decided to pursue a graduate degree in the field of Sociology. The experience of being a research assistant in the field of disaster and emergency management at LSU has inspired her research focus as the impacts of disasters and emergencies on vulnerable populations and communities. She anticipates graduating with her Ph.D. degree in May 2018.