NAVIGATING THE ECONOMIC DOWNTURN: HOW NONPROFITS AND FOUNDATIONS CAN WORK TOGETHER

MICRONUTRIENT INTERVENTIONS TO ADDRESS THE WORLD'S CHRONIC HEALTH AND HUNGER CRISIS

CHANGING THE LEGACY OF JUVENILE IUSTICE IN NEW YORK STATE

WATER AND CLIMATE CHANGE SECTION

RACE TO THE BOTTOM: INDULGENT USE AND SCARCITY OF WATER RESOURCES IN THE AMERICAN SOUTHWEST

CLIMATE CHANGE AND WATER DISTRIBUTION IN QUITO, ECUADOR

NONPROFIT EXECUTIVE COMPENSATION: TOO MUCH OR NOT ENOUGH?

RUNNING FOR OFFICE: A GRADUATE STUDENT'S PERSPECTIVE

MEETING THE HEALTHCARE NEEDS OF THE YOUNG, CHRONICALLY ILL, AND SEVERELY DISABLED PATIENTS IN NURSING HOMES

THERE IS PRIDE IN THE HARBOR: BALTIMORE'S FAÇADE

BOOK REVIEW: THE GREEN COLLAR ECONOMY: HOW ONE SOLUTION CAN FIX OUR TWO BIGGEST PROBLEMS BY VAN JONES

MITIGATING THE NEIGHBORHOOD EFFECTS OF LENDER HOMEOWNERSHIP IN EASTERN QUEENS

MATERNAL MORTALITY: A COMPARATIVE STUDY BETWEEN HONDURAS AND PERU

WAGNER REVIEW

NEW YORK UNIVERSITY
ROBERT F. WAGNER GRADUATE SCHOOL
OF PUBLIC SERVICE



MISSION

The Wagner Review is the student-run academic journal of the Robert F. Wagner Graduate School of Public Service at New York University. The Wagner Review promotes dialogue on a wide range of issues related to public service, by publishing original research from a diverse group of students and alumni, that reflects the academic programs offered and scholarly research conducted at the Wagner School.

ROBERT F. WAGNER GRADUATE SCHOOL OF PUBLIC SERVICE

Established in 1938, the Robert F. Wagner
Graduate School of Public Service offers
advanced programs leading to the
professional degrees of Master of Public
Administration, Master of Urban Planning,
Master of Science in Management, and Doctor
of Philosophy. Through these rigorous
programs, NYU Wagner educates the future
leaders of public, nonprofit, and health
institutions, as well as of private organizations
serving the public sector.

NEW YORK UNIVERSITY

Founded in 1831, New York
University (NYU) is the largest
private university in the United
States. The University, which is
composed of 14 schools, colleges,
and divisions, occupies five major
centers in Manhattan. It operates
branch campus and research
programs in other parts of the
United States and abroad, as well
as study abroad programs in more
than 25 countries.

The Robert F. Wagner Graduate School of Public Service 295 Lafayette Street | New York, NY | 10012-9604 212.998.7414 | wagner.admissions@nyu.edu | http://wagner.nyu.edu/

Volume XVI, 2008-2009

THE WAGNER REVIEW

EDITOR-IN-CHIEF Sara Courtney Brown

MANAGING EDITOR
Donzelina A. Barroso

BUSINESS MANAGER
Penelope Madry

REVIEW BOARD
Galin Brooks
Moschell A. Coffey
Justin Eppley
Kate Heckel
Gwendolyn Litvak
Matthew Looney
Adam Morris
Andrea Spender
Hyun Shana Sung

EDITORIAL BOARD Karen J. Barry Teresa Bergey Patricia Bertuccio Angela Cheng Rebecca DiBennardo Amenawon Esangbedo **Duane Esteves** May Hui Melissa Husby Steven Jean Grace Lee Leora Lipton Breann Peterson Lindsey H. Reu Lena Serrano Elizabeth Ann Wolff **Alvin Wong**

FACULTY ADVISOR Iohn Gershman

PRODUCTION STAFF
COPY EDITOR
Eleanor Levine

DESIGNER
Reid Smith

PRINTER
Cadmus
Communications

GUIDELINES FOR SUBMITTING TO THE WAGNER REVIEW:

The Review accepts submissions from current full- and part-time students of the School, as well as from alumni. Articles are vetted through a competitive process by the Review Board and prepared for production by the Editorial Board. Articles should be submitted in English, and should represent original research that is current. Submissions should represent the broad range of interests relevant to the wider Wagner community. To send inquiries to the Wagner Review, please email: wagner.review@gmail.com.

EDITOR'S NOTE:

The election of President Barack Obama on the night of November 4, 2008, was met with jubilation in the liberal haven of New York City. After the results were called, crowds of supporters filled the city's streets, parks, and squares. People literally danced in the streets chanting, "Yes we can!" and hugged strangers. This continued on until the early hours and whether a person agreed with the election outcome or not, the energy was undeniable. There was an enthusiasm in the air that was palpable to the masses and to students of public service who thrive on hope for the future.

This year's edition of the *Wagner Review* is dedicated to the hope of maintaining this energy and enthusiasm in the future of public service. After the crowds stopped dancing and the intersections were cleared, we awoke with the stark reality of how much work there really is to do in order to get our country and world moving in the right direction. We need to address issues that are unique and challenging beyond anything our civilization has faced prior while still focusing on age-old issues that have challenged societies for centuries.

Our writing this year takes aim at this new era of public service. **Amy Holmes** takes a look at how non-profits and foundations can survive the current recession, while **Sara Rosen** proposes a prosaic way of analyzing health and hunger in the developing world. **Andrea Taylor** analyzes the policies of the juvenile justice system in New York State, and **Erica Dixon** gives an analysis on how to attract top talent to the non-profit sector. We have an interview with **Victoria Lebron**—who is both a graduate student and holds elected office—to pick her brain on how to get started on being an elected official. **Jordan Weitz** explores the policy of care provided for the severely disabled population under the age of sixty-five, while **Kathleen Denny** explores the implication of urban revitalization efforts on a city's development. **Patricia Bertuccio** conducts a book review of *The Green Collar Economy: How One Solution Can Fix Our Two Biggest Problems* by Van Jones to delve into how Mr. Jones proposes to turn our economy green. While the nation is in the midst of a subprime mortgage crisis, **Corrine Gentilesco, Annie Myers,** and **Abigail Westbrook** examine the impact of foreclosures on a Queens, New York neighborhood. Additionally, the team of **Nok Chhun, Joan Combellick, Moneesha Kamani, Lalitha V. Ramanathapuram,** and **Vanesa Rios** presents a comparative analysis of maternal mortality in two developing nations in the hopes of understanding what can make the difference in health outcomes for women.

New to the *Wagner Review* this year is the "Water and Climate Change Section". As future policy makers, we will have to address the politics of water in a world of a rapidly growing population, dwindling water resources, and a changing climate. This is a nascent policy area and we are just beginning to articulate the arena. This section is a highly collaborative group endeavor among three teams of Wagner students: Mikelle Adgate, Katleen Apltauer, Saumya Sara Puthenveettil, Carrie Wood, Suzanne Zuppello, Dea Denison, Lynn Pyfer, Margaret Della, Tanti Liesman, Suhaly Bautista, Nupur Chaudhury, and Jennifer Farmwald.

I would like to give special thanks and recognition to Donzelina Barroso, the *Wagner Review's* Managing Editor, for her work, talent, dedication, humor, and patience in putting together this expansive edition, as well as Penelope Madry, our Business Manager, for providing her adept business savvy to ensure we stayed afloat during trying times. This edition would not have happened without the patience and understanding of Lisa A. Taylor and John Gershman, who have both given their time and energy to giving this journal unyielding support. I would also like to thank Dean Ellen Schall, Dean Rogan Kersh, and Dean Tyra Liebmann for their continued support in this student-run endeavor. I hope they will find the faith they have put in this year's edition well founded.

Above all else, all thanks go to the talent and dedication of the twenty-six members of the *Wagner Review* staff. The energy and enthusiasm that has gone into this massive collaboration across all academic boundaries of the Wagner School of Public Service is a testament to the collaborative nature of the educational experience here. This venue for student engagement is truly valuable for promoting dialogue across disciplines and will become even more so over the coming years as our challenges become greater while new and unforeseen challenges arise. We must take the energy and enthusiasm that made us dance in the streets last November and bring it to the work we do every day to serve the public good. It will be through energetic engagement, fierce and consistent dialogue, and collaborative efforts that we will be able to take on these challenges throughout our careers.

"These are the tasks that need to be done and done now. To a large degree it is in your hands to assume leadership, take the initiative as it has been taken before in our history, reach out boldly to do the things which are needed to be done, and, in that way, meet the challenge of our times."

ROBERT F. KENNEDYWashington, D.C.
October 20, 1959



CONTENTS

NAVIGATING THE ECONOMIC DOWNTURN: HOW NONPROFITS AND FOUNDATIONS CAN WORK TOGETHER AMY HOLMES	1
MICRONUTRIENT INTERVENTIONS TO ADDRESS THE WORLD'S CHRONIC HEALTH AND HUNGER CRISIS SARA ROSEN	5
CHANGING THE LEGACY OF JUVENILE JUSTICE IN NEW YORK STATE ANDREA TAYLOR	13
WATER AND CLIMATE CHANGE SECTION INTRODUCTION	21
RACE TO THE BOTTOM: INDULGENT USE AND SCARCITY OF WATER RESOURCES IN THE AMERICAN SOUTHWEST MIKELLE ADGATE, KATLEEN APLTAUER, MARGARET DELLA, DEA DENISON, TANTI LIESMAN, SAUMYA SARA PUTHENVEETTIL, LYNN PYFER, COURTNEY WOLF, CARRIE WOOD, SUZANNE ZUPPELLO	23
CLIMATE CHANGE AND WATER DISTRIBUTION IN QUITO, ECUADOR SUHALY BAUTISTA, NUPUR CHAUDHURY, JENNIFER FARMWALD	37
NONPROFIT EXECUTIVE COMPENSATION: TOO MUCH OR NOT ENOUGH? ERICA DIXON	45
RUNNING FOR OFFICE: A GRADUATE STUDENT'S PERSPECTIVE AN INTERVIEW WITH VICTORIA LEBRON	49
MEETING THE HEALTHCARE NEEDS OF THE YOUNG, CHRONICALLY ILL, AND SEVERELY DISABLED PATIENTS IN NURSING HOMES JORDAN WEITZ	53
THERE IS PRIDE IN THE HARBOR: BALTIMORE'S FAÇADE KATHERINE DENNY	59
BOOK REVIEW: THE GREEN COLLAR ECONOMY: HOW ONE SOLUTION CAN FIX OUR TWO BIGGEST PROBLEMS BY VAN JONES PATRICIA BERTUCCIO	67
MITIGATING THE NEIGHBORHOOD EFFECTS OF LENDER HOMEOWNERSHIP IN EASTERN QUEENS CORINNE GENTILESCO, ANNIE MYERS, ABIGAIL WESTBROOK	69
MATERNAL MORTALITY: A COMPARATIVE STUDY BETWEEN HONDURAS AND PERU BY NOK CHHUN, JOAN COMBELLICK, MONEESHA KAMANI, LALITHA V. RAMANATHAPURAM, VANESA RIOS	81
BIOGRAPHIES	91

NAVIGATING THE ECONOMIC DOWNTURN:

HOW NONPROFITS AND FOUNDATIONS CAN WORK TOGETHER

AMY HOLMES

ABSTRACT

onprofits and foundations alike are facing difficult challenges in the current economic climate. Many nonprofits are experiencing an increased demand for their services while their expenses are rising and funding is shrinking simultaneously. Foundations have seen large losses in their endowments and are being forced to make tough choices in allocating their resources. Many leaders in the philanthropic community are offering advice to foundation staff on how to respond to the economic crisis, and nonprofit executives can benefit from understanding how their funders are likely to deal with reduced grantmaking budgets. By communicating openly and working together creatively, nonprofits and foundations can strengthen their relationships and gain new clarity in their shared commitment to social change.

ECONOMIC CRISIS AND NONPROFITS

Nonprofits today are facing many unsettling prospects because of the financial crisis: tighter budgets, increased demand for services, a changing political landscape, and reduced funding from private and public sources. While many of these factors are beyond their control, there are steps that organizations can take to understand how their foundation supporters are impacted, and can effectively navigate the tough times ahead.

HOW SOME INDIVIDUAL FOUNDATIONS ARE RESPONDING

In 2008, private foundations saw their endowments shrink significantly, and as a result, saw their grantmaking capacity seriously reduced. A recent survey in the *Chronicle of Philanthropy* found that endowment sizes fell by a median of 29% from 2007 to 2008. Foundations, private investors, and nonprofits alike have seen catastrophic losses in their investments or reserve funds through the fraudulent activity of unscrupulous investors, such as Bernard Madoff, who ran a Ponzi scheme, and defrauded billions of dollars from philanthropic and nonprofit investors. These dramatic losses will affect fiscal planning

and programmatic operations for nonprofits in the foreseeable future. Many private foundations calculate their required 5% payout rate using a

66 ...ENDOWMENT SIZES FELL BY A MEDIAN OF 29% FROM 2007 TO 2008.

rolling average of assets over the past three to five years, so their giving may not be affected soon. However, others are recalculating their grantmaking budgets for 2009 based on fewer resources, and are facing difficult choices.

In a recent survey of member foundations, the Environmental Grantmakers Association found that members have typically lost 20% to 40% of their assets. The responses to how the downturn will affect their work varies, but many plan to reduce their giving next year by some amount, and will carefully consider their priorities when allocating resources to organizations that most closely fit their missions. There was a wide array of responses. Options include: cutting grantmaking budgets by

roughly 5% to 30% through small reductions in all renewal grants, cutting grants that fall outside the core mission, and declining all new grant applications. Others intend to maintain the same level of giving in 2009 as originally planned, and accept a drop in the endowment; shifting from project-specific funding to general operating grants to allow for greater flexibility; or paying large grants in installments over a longer period of time, rather than in one lump sum. There is also the option of redirecting funds for capital campaigns for buildings or endowments to grants for core operations; or in some cases, increasing funding in 2009 to address the increased demand for social programs and emergency relief services.²

Not every nonprofit will be fortunate enough to have funders who will choose to increase funding, though foundations that take a long-term strategic approach to their grantmaking may be the most likely to work constructively with their grantees to ensure that services are not reduced in this time of need.

HOW THE PHILANTHROPIC SECTOR IS RESPONDING

Several organizations that represent funders have created guides to giving in this challenging environment, in an effort to help their members and the philanthropic sector in general to manage their giving and achieve their missions with shrinking assets. In an article for the Foundation Center's *Philanthropy News Digest*, Katherina Rosqueta of the University of Pennsylvania's Center for High Impact Philanthropy recommends that funders evaluate their grant portfolios and focus on making grants that generate the greatest impact in key areas of interest. She advises foundations to analyze their grantees and optimize the "bang for the buck" with grant funds. Rosqueta writes:

This kind of analysis requires asking three questions before thinking about allocating scarce dollars: What change are we targeting? What activities are required to produce that change? How much does that change cost? It is only by knowing the answers to those questions—and using them to inform rational capital allocation—that the philanthropic sector has a chance of doing the most good it can given its currently limited resources.³

Kathleen Enright, the Executive Director of Grantmakers for Effective Organizations, a membership group for foundations, recently wrote a message to members, in response to the economic

66...FOCUS ON MAKING GRANTS
THAT GENERATE THE GREATEST
IMPACT IN KEY AREAS... 99

crisis, that offered funders advice in planning their grantmaking. Enright recommends that donors hold steady, maintaining giving in 2009 at the same rate as 2008, which may mean that foundations increase their payout beyond the required 5%. She advises that funders allow their grantees to use current grants for general operating expenses by releasing them from program-specific requirements. She also suggests making loans to grantees to help them get through cash flow problems without reducing their services, and finally communicating openly with grantees about where their greatest needs are and how funders can help them sustain their work.⁴

In the *New York Times*' recent Giving section, Stephanie Strom interviews fundraisers who caution that fluctuations in giving are generally less severe than swings in the broader economy, and that during economic downturns, giving has historically remained strong.⁵ However, individual and corporate giving may be more sensitive to changes in the markets than that of private foundations. The philanthropic community is encouraging donors to consider this insight in an effort to support valued nonprofit partners and help them weather the current economic climate.

STRATEGIES FOR FUNDRAISING IN CHALLENGING TIMES

As foundations face tough choices about allocating their budgets, nonprofits should reach out to their supporters, and maintain open, honest communication. Organizations should clearly communicate any changes in their top priorities, and tell donors about potential financial problems. If organizations have experienced an increased demand for the services, or changing needs among target populations, they must inform their donors and allow for responsiveness to the realities on the ground. Organizations must also ask for greater flexibility when using grants already received, and stress the importance of general operating support

for renewal grants. Program-specific grants may strain an organization that forecasts increased expenses, losses in unrestricted support, and a shrinking reserve fund. Therefore, organizations must reiterate the mission, values, and program objectives in terms of how they match donors' strategies. Organizations should quantify the impact of their work and demonstrate how their organization makes meaningful changes. Funders will continue to invest in organizations that can show real results in solving the problems that matter most to them. Finally, nonprofits should ask for a loan if they face cash flow problems. It is crucial to keep in mind that predicting cash flow may become difficult as some large grants might be split into smaller installments. Based on reduced city and state budgets, payments from public funding streams may be significantly delayed. If cash flow becomes undependable and access to credit is limited, organizations should consider asking funders for a loan or a program-related investment. Currently, few foundations make program-related investments, but they represent a growing trend among private foundations that want to use their resources strategically to help grantees achieve their goals.

CONCLUSION

The next few years will be challenging for both nonprofits and private foundations. Budgets are tightening while demand for services and the cost of providing them are growing. This is the time for foundations and their nonprofit grantees to strengthen relationships, be forthcoming about an organization's financial status, and emphasize the impact of the work done in the community. Navigating hard times with dedicated supporters will foster a more robust collaboration in good times, and this process will allow nonprofits and funders to find renewed clarity, purpose, and trust in their partnerships.

NOTES

- Noelle Barton and Ian Wilhelm, "Many Foundations Have Lost Almost One-Third of Their Assets, Chronicle Study Finds," *The Chronicle of Philanthropy*, January 21, 2009.
- Environmental Grantmakers Association, "Economic Crisis: EGA Responds," November 18, 2008.
- Katherina Rosqueta, "Philanthropic Triage During an Economic Downtown: Linking Financial to Impact," *Philanthropy News Digest*, October 21, 2008.
- Kathleen Enright, "Responding to the Economic Crisis," Grantmakers for Effective Organizations, October 23, 2008.
- Stephanie Strom, "Bracing For Lean Times Ahead," New York Times, November 11, 2008.

MICRONUTRIENT INTERVENTIONS TO ADDRESS THE WORLD'S CHRONIC HEALTH AND HUNGER CRISIS

SARA ROSEN

ABSTRACT

his paper explores the nature and global magnitude of malnutrition and efforts to address the problem, particularly in poor communities of developing countries. It discusses the role of nutrition in human development, adverse health effects of micronutrient deficiencies—specifically Vitamin A, iodine, and iron—and convergent methods to eliminate these deficiencies: supplementation, fortification, and biofortification. Specific case examples of these nutrient interventions are also provided. Finally, the paper presents an analysis of challenges and opportunities for expanding micronutrient interventions in the future.

FACTS

THE IMPORTANCE OF NUTRITION

Good nutrition is the cornerstone of healthy development and survival.¹ Good nutrition means consuming food that supplies the body with adequate calories, vitamins, and minerals. If the body is undernourished, it lacks the capacity to properly grow, resist infections, recover from illness, learn, expend energy, and procreate.² The availability of and access to nutritious food and freedom from hunger are considered basic human rights.³ Reducing hunger is not only a moral imperative but also provides significant economic benefits. Studies show that well-nourished populations are more productive and have lower healthcare costs, resulting in more sustainable and fruitful economies.⁴

THE AVAILABILITY OF AND ACCESS TO NUTRITIOUS FOOD AND FREEDOM FROM HUNGER ARE CONSIDERED BASIC HUMAN RIGHTS.

UNDERSTANDING MALNUTRITION

Malnutrition is the condition resulting from inadequate intake of protein, calories, and micronutrients (e.g., vitamins or minerals) and its adverse health effects.⁵ For purposes of this paper, malnutrition refers to a nutritional deficiency that results from lack of food, also called "undernutrition." Manifestations of malnutrition include impaired physical and cognitive development, specific disorders resulting from micronutrient deficiencies, and being severely underweight.⁷

Malnutrition is a global epidemic. Worldwide, it affects one in three people at some time in their lives. For young children in the developing world, the situation is particularly dire, with more than 27% of children under the age of five, or 146 million, undernourished. The bulk of malnourished children live in South Asia, where more than 46% of children under the age of five are underweight. India, Pakistan, and Bangladesh contain more than half of the world's malnourished children, although together these three countries are home to just under 30% of the world's under-five population. Sub-Saharan

Africa trails South Asia, with 28% of its young children undernourished. Each day, 40,000 children worldwide die from malnutrition and disease.¹⁰

DISPROPORTIONATE BURDEN: MOTHERS AND CHILDREN

The burden of hunger and malnutrition falls disproportionately on women and children.11 Undernutrition is the single most important risk factor affecting child health and mortality.12 It contributes to more than 60% of deaths annually among children under age five in the developing world. When undernourished mothers become pregnant, it perpetuates the cycle of nutritional deprivation in children.¹³ Their fetuses are affected as these deficiencies impair brain and other organ formation. Developmental problems continue through birth until two years of age if children are not properly nourished. This period, between conception and 24 months of age, is referred to as the "window of opportunity" when key growth occurs.14 If children are not properly nourished during this time, the damage is largely irreversible.¹⁵ Overall, well-nourished mothers face fewer complications during pregnancy and childbirth and put their children on a firmer developmental path.¹⁶

EMPHASIS: MICRONUTRIENT DEFICIENCIES

Micronutrient deficiencies, caused by insufficient intake of essential vitamins and minerals, continue to fuel the problem of malnutrition. According to the World Health Organization (WHO), deficiencies of iron, iodine, Vitamin A, and zinc each rank among the top ten leading causes of death by disease in developing countries. 17 An estimated two billion people exhibit deficiencies of these key vitamins and minerals.18 Most of the affected individuals lack multiple nutrients and live in low-income countries. 19 In these countries, micronutrient rich foods—such as fruits, vegetables, and fortified foods—are often unavailable or prohibitively expensive, rendering them out of reach for most families. This results in entire families and communities that are more susceptible to infectious diseases, have impaired physical and cognitive abilities, and are at risk of premature death. 20 These health problems are not without costs: economists estimate that every child whose physical and mental development is stunted by malnutrition stands to lose between 5% to 10% of his or her lifetime earnings.21

THESE HEALTH PROBLEMS ARE NOT WITHOUT COSTS: ECONOMISTS ESTIMATE THAT EVERY CHILD WHOSE PHYSICAL AND MENTAL DEVELOPMENT IS STUNTED BY MALNUTRITION STANDS TO LOSE BETWEEN 5% TO 10% OF HIS OR HER LIFETIME EARNINGS.

HEALTH EFFECTS OF MICRONUTRIENT DEFICIENCIES

Iodine deficiency is the primary cause of preventable mental retardation and brain damage.²² A lack of iodine in pregnant women increases the chances of miscarriage, stillbirth, and infant mortality.²³ Iodine deficiency affects 140 million pre-school children and over seven million pregnant women worldwide.²⁴

Vitamin A enables the immune system to function properly. Without it, there is an increased risk of death from diseases such as measles, diarrhea, and acute respiratory infections.²⁵ Vitamin A deficiency is the leading cause of childhood blindness in the developing world.²⁶ Current estimates show that between 100 and 140 million children under the age of five lack sufficient Vitamin A.²⁷

Iron deficiency is the most pervasive nutritional problem in the world, affecting up to five million people. ²⁸ Iron is critical to proper bodily function because it forms the molecules that carry oxygen in the blood; without it, immunosuppression, learning disabilities, and death can potentially result. ²⁹

These are the most pervasive micronutrient problems; however, it is common to see co-morbid deficiencies of Vitamins C and B, folate, zinc, and niacin, all of which are essential to proper growth and development, cognitive functioning, and immune response.

MICRONUTRIENT INTERVENTIONS

Micronutrient deficiencies can be addressed by improving access to nutritious foods. When this is not possible, supplementation, fortification, and biofortification are other means to this end. Supplements are contained doses of specific vitamins

and/or minerals that are designed to fill a nutritional gap when consumption alone does not supply adequate nutrients. Supplements can take several forms, including tablets that are taken with regular meals, nutrient- and calorie-packed foods that augment or are used in lieu of a meal, or spreads or sprinkles, which are added to regularly consumed foods. 30 "Ready to Use Therapeutic Foods" (RUTFs), nutrient-rich products designed for rapid weight gain and vitamin and mineral delivery, also fall within the supplement category. 31 RUTFs are often used in emergencies, but a movement is under way to disseminate them more widely because of their low cost and efficiency.

Fortification is the process by which vitamins and/or minerals are added into a food source that does not naturally contain those specific nutrients in order to augment its nutritional value. A range of products can be fortified based on the staple diet of the population in need. For example, sugar, wheat flour, rice, cooking oil, and soy sauce are fortified in the developing world. ³² Another option is the production of a concentrated premix that can be distributed to community-based institutional settings (e.g., medical centers and schools) and then added during food preparation.

Biofortification, a new method of fortification gaining momentum in the scientific community, uses plant-breeding techniques to develop micronutrient-dense staple crops that contain significantly higher levels of key vitamins and minerals.³³ In essence, nutrient-rich seeds are developed that fortify themselves (i.e., the traits become self-perpetuating) with micronutrients.³⁴

CASE EXAMPLES: SUPPLEMENTATION

Supplement distribution has occurred in several countries around the world. In West Africa, a native palm oil that is rich in Vitamin A (one teaspoon of the unrefined oil meets children's daily Vitamin A requirements) was identified.³⁵ Instead of instituting the more common, semi-annual supplement distribution, the local community chose to add the oil to foods distributed at local schools. This intervention has reduced the percentage of students with Vitamin A deficiency from 50% to 5% within a year of its introduction.³⁶ To date, distribution has been expanded to five provinces in Burkina Faso, Africa. In Niger, an RUTF was distributed widely with great

success. Although it was used within the context of an emergency situation, it is discussed here because of its potential for more widespread use. In the spring of 2005, the number of severely malnourished children in Niger increased dramatically following a severe drought and locust infestation the year before. Médecins Sans Frontières (MSF), an international humanitarian aid organization, treated more than 3,000 hungry children each week during this ongoing crisis. Given this demand, MSF was not able to place all of the children in therapeutic feeding centers that offered medical care, nutritional rehabilitation, and therapeutic milk products. As an alternative, the organization created a supplement akin to peanut butter called "Plumpy Nut," which provides the proper balance of fat, sugar, and protein (macronutrients), and vitamins and minerals (micronutrients).³⁷ Each dose of Plumpy Nut is packaged as an individual serving, rendering it resistant to bacterial contamination and limiting the chance for distribution beyond the intended recipient. Plumpy Nut does not require clean water, cooking, or preparation of any kind, making it appealing in comparison to many supplement alternatives. Leading nutritional experts have endorsed this supplement as having promise for regular distribution in communities lacking nutrient-rich food resources.

CASE EXAMPLES: FORTIFICATION AND BIOFORTIFICATION

Bread is the staple food of Afghanistan and supplies most Afghans, including the poor, with more than half of their daily caloric intake.³⁸ In a country plagued by widespread malnutrition and high rates of maternal and infant mortality, flour fortification is a valuable method to introduce more nutrients into the diet of the local population. In response, two United Nations (UN) agencies launched a smallscale wheat fortification project in Kabul.³⁹ A local nongovernmental organization (NGO) with several years of experience in Afghanistan was selected to implement the program. The agencies identified 16 small mills and one bread factory, which together could produce 25 tons of fortified flour per day. The mills did not have access to a constant power source; therefore, Vitamins A, B1, and B2, niacin, folate, and iron were mixed by hand with small amounts of flour to produce 500-g packets of concentrated premix—each used to fortify 50 kg of flour. The local NGO distributed the premix and monitored progress at the mill level. Alongside the creation and

distribution of the flour, more than 40,000 educational pamphlets were distributed to families surrounding the mills that discussed the benefits of fortified products.

Biofortification, although relatively new, has been used to create a sweet potato that contains a high level of beta-carotene (a precursor of vitamin A) for distribution throughout Africa. 40 Micronutrients typically comprise about 10 parts per million of the physical mass of a seed, but this variety has more than 32 parts per million of beta-carotene. Given its nutritional content and tolerance to the temperate regions of Africa, this sweet potato is being disseminated widely. To date, consumers in ten countries have adopted it as an alternative to the variety native to this area. 41

PROGRESS TO ELIMINATE MICRONUTRIENT DEFICIENCIES

Significant progress has been made globally to reduce micronutrient deficiencies. In the case of iodine, Universal Salt Iodization (USI) campaigns have decreased iodine deficiency rates by increasing the number of households in the developing world consuming iodized salt to more than 70%, up from 20% in 1990.⁴² This translates into 91 million children now being protected from iodine deficiency in the developing world each year.⁴³ These campaigns brought together coalitions comprised of diverse public and private sector groups—including salt producers, governments, UN agencies, teachers, and families—to collectively increase iodized salt coverage. 44 Although much has been accomplished, 30% of the households in the developing world, including 41 million infants and newborns, are still susceptible to iodine deficiencies.

Access to Vitamin A supplementation has also improved over the last several years, with 70% of children in more than 40 developing countries receiving at least one supplement annually. This basic supplement costs only two cents per capsule; and if taken semiannually, it can reduce child mortality by 23%. Efforts to improve supplement distribution are under way through the Vitamin A Global Initiative, a partnership among several NGOs, UN agencies, and foreign governments to reach those still not receiving any treatments and to make a second treatment available to those receiving only a single annual dose.

Initiatives for reducing iron deficiency have been somewhat less successful. On a positive note, an international movement to fortify all wheat flour with iron and folic acid is under way, and now more than 49 countries are adding iron to flour. Still, there has been no reduction in the number of anemic mothers since the 1990s. ⁴⁷ This lack of improvement is partially due to the supplement programs reaching women too late in their pregnancies.

Outside of the progress to eliminate specific micronutrient deficiencies, advances in the research and testing of biofortification methods have occurred. A global alliance of institutions and scientists called "HarvestPlus" seeks to improve nutrition by breeding several new varieties of staple food crops with enhanced levels of micronutrients. Research is under way to determine the maximum level of micronutrient content per seed and whether these nutrients can be fully absorbed by the human body. 49

ANALYSIS

CHALLENGES IN COMBATING MICRONUTRIENT MALNUTRITION

Several challenges remain that limit the comprehensive treatment of malnutrition. First, detecting malnutrition is difficult, which is why the phenomenon is commonly referred to as "hidden hunger." Most of those affected do not have overt clinical symptoms, making it nearly impossible to detect a problem.⁵⁰ In total, 75% of children who die from causes related to malnutrition are only mildly or moderately undernourished and therefore show no outward signs of their vulnerability.⁵¹

Second, supplementation and/or altering diet alone will not improve nutrition. Malnutrition is

66 IN TOTAL, 75% OF CHILDREN WHO DIE FROM CAUSES RELATED TO MALNUTRITION ARE ONLY MILDLY OR MODERATELY UNDERNOURISHED AND THEREFORE SHOW NO OUTWARD SIGNS OF THEIR VULNERABILITY.

intricately connected to macro issues related to sanitation, clean water, education, healthcare, disease prevalence, and food and agriculture policy. Unless these issues are managed alongside a food or micronutrient intervention, there will be limited opportunity for success.

A third concern is the ability to sustain micronutrient interventions over time. Once a program is created, there is no guarantee that it will continue without oversight or adequate funding. Estimates show that globally addressing nutrient deficiencies will require about \$1 billion per year.⁵² Even for ongoing fortification and supplement programs, there is growing concern that sustainability will be difficult.⁵³ Consider the Afghanistan fortification example: the UN agency sponsoring the program fully subsidized the cost of the premix in 2006, but in 2008, only 25% of the cost was covered.⁵⁴ Biofortification, too, has forthcoming funding challenges. Although scientists claim that it is the cheapest alternative to addressing malnutrition, it requires an \$8 million initial investment per staple crop over the next 10 years. With six crops presently in development, the total estimated cost is \$48 million.55

Even with the necessary funding, several key constituencies, including community members, families, and governments, must remain committed for nutrition programs to succeed. Community members are crucial because they are often the ones implementing programs locally, since most international agencies lack the capacity to oversee the daily operation of every project they fund. Locals involved in nutrition programs, especially in the case of fortification, need to be committed, organized, and trained. Because fortified goods expire within six to twelve weeks, individuals providing project oversight must be mindful of timely logistics to ensure items are procured, fortified, transported, and distributed before expiring.⁵⁶ In many cases, community members also are in charge of adding the nutrient premix and must do so below a certain threshold to avoid toxicity. For example, while iron is an essential element for all living organisms, excessive amounts of it can cause tissue damage by spurring the growth of free radicals in the body.⁵⁷ Family members are needed to reduce the risk of noncompliance with supplementation regimens (especially those regimens with a frequent intake

FOR MANY PEOPLE AND, WITHOUT KNOWLEDGE OF THE IMPORTANCE OF CONSUMING KEY NUTRIENTS, THERE WILL BE ONLY LIMITED ACCEPTANCE OF NEW SUPPLEMENTS OR FORTIFIED FOODS.

schedule) and ascertain that the appropriate family members are consuming the specialized foods. Governments are integral to this process as well because they have the ability to legislate and provide the financial and material support needed to expand nutritional interventions, monitor compliance, and punish noncompliance.⁵⁸ Government support is also needed to demonstrate that interventions from outside agencies are safe and legitimate.

Fourth, education must be part of any successful intervention. Nutrition is a foreign concept for many people and, without knowledge of the importance of consuming key nutrients, there will be only limited acceptance of new supplements or fortified foods. Educational programs are particularly critical if biofortification is to become a viable solution to malnutrition. Farmers will need to learn new cultivation practices, including proper crop handling, to reduce degradation. Malnourished individuals must also be taught cooking methods that minimize nutrient losses. 60

Economic realities are a sixth barrier prohibiting the widespread expansion of micronutrient interventions. The Afghanistan case, where mills produced fortified flour for the community, illustrates this point. Although the population learned about the benefits of this nutrient-rich flour, many people would not purchase it because it was more expensive than non-fortified flour imported from neighboring countries. This restricted the expansion of the local market and reduced demand for locally produced goods. Since the millers were not given a financial incentive to fortify the flour, the process became excessively costly, hampering their ongoing participation in the project.

Cultural barriers also impede micronutrient programs. In Afghanistan, imported flour, in

addition to being cheaper, was preferred by the local community because it was white and therefore regarded as better quality wheat. In Zambia, a similar milling project was launched to distribute fortified flour to residents in lieu of having them take whole maize to be milled. Skepticism abounded: community members were concerned about a foreign substance being added to their food; there were rumors that the new flour made men sexually weak, stunted children's growth, harmed fetuses, and transmitted HIV; and because Africans were distrustful of outsiders, they assumed the flour might be used to inflict harm as severe as death upon them.

Finally, the problem of malnutrition is vast and difficult to tackle comprehensively. Several populations, beyond those addressed within the context of this paper, suffer from nutritional deficiencies; they include refugees and displaced persons, families in rural or food-insecure regions, and communities devastated by AIDS and HIV.

OPPORTUNITIES FOR MICRONUTRIENT INTERVENTION

In spite of the challenges, expansion of nutrition programs is still possible. The majority of interventions are cost-effective. In the case of fortified premixes, one daily serving can deliver one-third of a child's daily allowance of iron, folic acid, Vitamin A, and Vitamin C, at a cost of less than one cent a year per child. This type of intervention delivers several micronutrients simultaneously and does not require a significant infrastructure investment. On a macro level, micronutrient deficiencies can consume as much as 5% of a country's gross domestic product (GDP), but addressing them in a comprehensive and sustainable way costs less than 0.3% of a country's GDP.

Nutritional interventions and related education efforts can easily be coupled with other health and developmental initiatives.⁶⁸ For example, several agencies use school feeding programs as a way to deliver nutrients to children. This intervention is somewhat limited, however, given that not all nutrient-deficient children are of school age or enrolled in school (because of competing responsibilities at home), to the detriment particularly of young girls. Another approach is to link nutrition to prenatal care and basic maternal and

child health services. The premise is that if women and children have access to a regular health center, then a doctor can integrate nutrition discussions into regular visits. Similarly, the center can serve as the distribution hub for supplements and fortified foods.

Finally, there are multiple intervention strategies to address the problem. Several types of supplements and fortification methods are currently available, and other major developments are in the works. Nutrition experts continue to research new multivitamins that require less frequent administration, enhanced and cheaper nutrient premixes, and more cost-effective methods to fortify staple foods. ⁶⁹ An example of this type of innovation is a new gravity-powered device to fortify flour, which automatically adds the correct dosage of micronutrients to the milled grains without electricity. ⁷⁰

CONCLUSION

Malnutrition, even in its mildest form, contributes to millions of deaths and increasing rates of illness each year. For both health and economic reasons, eradication of micronutrient deficiencies should be at the top of the global health and human rights agenda. While various campaigns over the last several years have made the plight of malnourished individuals an international priority, there is still much work to be done. Unless major players, in concert with local governments and communities, are able to coordinate more sustainable micronutrient strategies, efforts will continue to fall short of making a long-term impact on the health and well-being of adults and children in developing countries.

NOTES

- UNICEF, "Progress for Children Report card on Nutrition," May 2006.
- 2. Ibid.
- 3. See UNICEF's Childinfo website, "Statistics by Area": http://www.childinfo.org/statsbyarea.html.
- 4. UNICEF, "Progress for Children Report card on Nutrition," May 2006.
- 5. Ibid.
- 6. Ibid.
- 7. Ibid.
- 8. Ibid.
- 9. Ibid. 10. Ibid.
- United Nations World Food Programme (WFP), "Review of Policies, Objectives & Strategies," 1994.
- 12. WFP, "Strategic Plan 2004-2007," October 2003.
- 13 Ibid
- 14. The World Bank, "Repositioning Nutrition as Central to Development: a Strategy for Large-Scale Action," 2006.
- 15. Ibid.
- 16. UNICEF, "Progress for Children Report card on Nutrition," May 2006.
- 17. WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 18. World Health Organization (WHO), The United Nations World Food Programme (WFP) and The United Nations Children's Fund (UNICEF), "Preventing and Controlling Micronutrient Deficiencies in Populations Affected by an Emergency," 2007. See: http://www.who.int/nutrition/publications/WHO_WFP_UNICEF statement.pdf.
- 19. Ibid.
- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 21. WFP website: http://www.wfp.org/english.
- 22. UNICEF website: http://www.unicef.org.
- 23 Ibid
- 24. WFP website: http://www.wfp.org/english.
- 25. UNICEF website: http://www.unicef.org.

- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 27. UNICEF, "Progress for Children Report card on Nutrition," May 2006.
- 28. UNICEF website: http://www.unicef.org.
- 29. WFP website: http://www.wfp.org/english
- 30. WFP, "Review of Policies, Objectives & Strategies," 1994.
- Milton Tectonidis, "Acute Malnutrition: A Highly Prevalent, Frequently Fatal, Imminently Treatable, Neglected Disease," *Doctors Without Borders International Activity Report*, 2006.
- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 33. Ross Welch, "Biofortification: a Sustainable Agricultural Approach to Addressing Micronutrient Malnutrition," Feedinfo News Service Scientific Reviews, May 2005. See: http://www.feedinfo.com.
- 34. Ibid
- Micronutrient Initiative (MI), "Community-Based Strategies Fortifying Foods at the Community level," 2007.
- 36. Ibid.
- 37. The World Bank, "Repositioning Nutrition as Central to Development: a Strategy for Large-Scale Action," 2006.
- 38. Ibid.
- 39. Ibid.
- MI, "Community-Based Strategies Fortifying Foods at the Community level," 2007.
- 41. Ibid.
- 42. UNICEF website: http://www.unicef.org.
- 43. Ibid.
- 44. Ibid.
- 45. Ibid.
- 46. Ibid.
- 47. Ibid.48. HarvestPlus website: http://www.harvestplus.org.
- HarvestPlus, "How Cost-effective is biofortification in Combating Micronutrient Malnutrition? An Ex-ante Assessment," Working Paper No. 2, August 2007.

- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 51. UNICEF website: http://www.childinfo.org/areas/manutrition.
- World Bank, "Enriching Lives: Overcoming Vitamin and Mineral Malnutrition in Developing Countries," 1994. Available at: www.web.worldbank.org.
- HarvestPlus, "How Cost-effective is biofortification in Combating Micronutrient Malnutrition? An Ex-ante Assessment," Working Paper No. 2. August 2007.
- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- International Food Policy Research Institute, "Biofortification: Harnessing Agricultural Technology to Improve the Health of the Poor," 2002
- WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 57. Jane Crawley, "Reducing the Burden of Anemia in Infants and Young Children in Malaria-Endemic Countries of Africa: from Evidence to Action," The American Society of Tropical Medicine and Hygiene, 2004.
- WFP and the International Food Policy Research Institute, "Can Young Children's Nutritional Needs be Met with a Combination of Fortified Blended Foods and Local Foods?," 2004.

- International Food Policy Research Institute, "Biofortification: Harnessing Agricultural Technology to Improve the Health of the Poor," 2002.
- 60. Ibid.
- 61. WFP, "Fortifying Food in the Field to Boost Nutrition: Case Studies from Afghanistan, Angola and Zambia," 2006.
- 62. Ibid
- 63. Ibid.
- 64. Ibid.
- 65. Ibid.
- The World Bank, "Repositioning Nutrition as Central to Development: a Strategy for Large-Scale Action," 2006.
- 67. The World Bank, "Enriching Lives: Overcoming Vitamin and Mineral Malnutrition in Developing Countries," 1994. Available at: www.web.worldbank.org.
- The World Bank, "Repositioning Nutrition as Central to Development: a Strategy for Large-Scale Action," 2006.
- UNICEF, "Vitamin & Mineral Deficiency: A Global Damage Assessment Report."
- Micronutrient Initiative, "Annual Report 2006-2007." See: www.micronutrient.org.

CHANGING THE LEGACY OF JUVENILE JUSTICE IN NEW YORK STATE

ANDREA TAYLOR

ABSTRACT

ew York's juvenile justice system has long favored incarceration of youths over non-institutional alternatives, but fiscal year 2009 marked a significant shift in the state's juvenile justice agenda. Data from other states have shown that incarcerating juveniles who commit minor crimes is not rehabilitative; instead, over-incarceration of youths in New York has led to a juvenile recidivism rate of 80%. In contrast, some alternatives to

juvenile recidivism rate of 80%. In contrast, some alternatives to detention (ATD) and alternatives to incarceration (ATI) in New York City have posted recidivism rates below 20%. In addition, juvenile penal systems cost tens of thousands (or even hundreds of thousands) of dollars more to operate—more than rehabilitative alternatives. Given the downturn in New York's economy, now is the time to shift to alternatives that are more effective, and fiscally responsible than the current penal systems serving New York's youths.

BACKGROUND

In January 2008, Commissioner Gladys Carrión of the New York State Office of Children and Family Services (OCFS) announced she would close six juvenile detention facilities in New York in January 2009.1 The facilities, which maintained full staff capacity, housed few, if any, juvenile delinquents; and Carrión said closing the underused facilities would save the state millions of dollars and allow OCFS to restructure the state's juvenile justice system.² Carrión also proposed eliminating a significant source of state funding that would require municipalities and counties to bear the full costs of pre-trial detention when the state had previously reimbursed half of those costs.3 In proposing to close facilities and eliminate state funding for pre-trial detention, Carrión recognized the limited success and high cost of the juvenile prison system. Instead, she favored an expansion of more successful and less costly rehabilitation programs, such as alternatives to detention and alternatives to incarceration. But, because the prisons provide many jobs upstate, legislators from some of New York's most remote counties refused to allow them to close, and thereby eliminate valued jobs in economically dry regions. Yet, as New York's fiscal condition darkens, juvenile justice advocates have recognized the opportunity to significantly restructure the state's broken juvenile justice system, and the state's projected \$15 billion deficit in fiscal 2010 may force the hand of legislators.

NEW YORK'S INCARCERATED CHILDREN

New York holds approximately 2,000 youths in its juvenile justice system. They are mostly between the ages of 13 and 16, overwhelmingly African-American and Hispanic⁴ (86% combined), and from some of New York's poorest communities. 5 Sixty percent of New York's incarcerated youth come from the five boroughs of New York City,6 yet only five of OCFS's 31 residential facilities are located there. Of the children in the juvenile justice system, 55% have mental health problems of clinical significance, 78% have alcohol or substance abuse problems of clinical significance, and 24% have significant special education needs.⁷ Anecdotal evidence suggests many of these children have been victims of crime or experienced considerable trauma in their home lives. Most are guilty of misdemeanor crimes, such as possession of controlled substances, vandalism, or parole violation. More than 91% have never been

THEY ARE MOSTLY BETWEEN THE AGES OF 13 AND 16, OVERWHELMINGLY AFRICAN-AMERICAN AND HISPANIC (86% COMBINED), AND FROM SOME OF NEW YORK'S POOREST COMMUNITIES.

held in OCFS custody before,⁸ but based on current recidivism rates, more than 80% will be arrested again.⁹

SUCCESS STORIES IN JUVENILE JUSTICE: ALTERNATIVES TO DETENTION AND INCARCERATION

A number of counties in New York, including the five counties of New York City, have implemented alternatives to detention (ATD) in addition to adjustment programs¹⁰ that have reduced the numbers of youths placed in OCFS facilities. Judges who determine youths do not pose flight risks or threats to public safety may order youths into ATD programs rather than detention facilities. 11 Most ATD programs provide educational, mental health, and substance abuse services to their children. 12 In addition to ATD programs, a number of alternative to incarceration (ATI) programs divert youths from court-ordered placement in OCFS facilities to community-based supervision and treatment services similar to ATD programs. Both alternatives to detention and alternatives to incarceration aim to provide services to juvenile delinquents and juvenile offenders within their families and communities, 13 but they operate at differing levels of responsibility. Alternatives to detention divert youth from shortterm detention in local facilities, whereas alternatives to incarceration divert youth from longer-term placement in state-run OCFS facilities. As probation officers divert more cases from Family Court through adjustment, as Family Court judges order more youths into ATD programs, and as a growing number of ATI programs provide services to placement-bound youths, OCFS officials should expect the number of children in state-run facilities to steadily decline.

Detention and placement services cost New York taxpayers, its county governments, and local municipalities millions of dollars annually. New York (not including county and municipal funds) spends

more than \$150 million annually on juvenile incarceration. A OCFS estimated each empty bed costs taxpayers between \$100,000 and \$200,000 annually. Average cost per child will continue to rise as the total incarcerated population falls. With state facilities operating at only 65% capacity, empty beds were a principal factor in OCFS's proposal to close facilities and consolidate the system in fiscal 2009.

In addition to the expense of incarcerating children, it has not proven effective at rehabilitating youth or at reducing future criminal behavior. More than 80% of New York's incarcerated youths will be arrested within three years of release from OCFS facilities. 17 Alternatives to detention and incarceration, however, have proven much more effective at rehabilitating youth and reducing future criminal activity. Over the last 30 years, Missouri's shift from a model of incarceration to a model of community-based alternatives to detention and alternatives to incarceration for all but the most serious offenders has led to a recidivism rate just over 7%, among the lowest in the nation.¹⁸ Missouri's nationally recognized model keeps children in their communities and close to families when possible, and focuses on treatment and therapy for both children and their parents. 19, 20 In New York City, several communitybased ATI have posted recidivism rates below 20%,²¹ dramatically lower than the rate among OCFSincarcerated youth and markedly lower than the 46% recidivism rate among youth detained in New York City facilities.²² Reducing recidivism serves two purposes: rehabilitating juvenile delinquents and juvenile offenders, and reducing the threat to public safety.

66 IN 2008, NEW YORK CITY BUDGETED \$251 MILLION FOR JUVENILE JUSTICE EXPENDITURES. 99

Alternatives to detention and incarceration costs much less to operate per child per year than institutional facilities. In 2008, New York City budgeted \$251 million for juvenile justice expenditures. A December 2007 report by the New York City Independent Budget Office found that detention and placement of youth consumed more than 79% of the city's spending on juvenile justice.

Another 12% went to intake, probation, and adjudication costs,²³ leaving a mere 8%, totaling only \$20 million, to ATD and ATI.²⁴ Because detention for a single youth in city facilities costs more than \$200,000 per year and placement for a single youth in state facilities costs more than \$150,000 per year,²⁵ the City has substantial incentives to innovate. As a result, New York City has identified alternatives to detention and incarceration as sources of potentially significant savings; the Mayor's Office of Management and Budget estimated the city could save as much as \$43 million over fiscal years 2007 through 2010 by diverting New York City youth from placement in OCFS facilities.²⁶

THE IMPACT AND EXAMPLE OF NEW YORK CITY'S ALTERNATIVES TO DETENTION AND INCARCERATION

Mayor Bloomberg made juvenile justice reform a cornerstone of his 2007 State of the City address, and since then, New York City has been particularly aggressive in its attempts to reduce the city's reliance on OCFS placement. A number of city agencies run programs or use tools that ultimately serve to divert youth from OCFS facilities. The city also operates a number of re-entry support programs designed to provide aftercare (including mental health aftercare) with the intent of reducing recidivism, as well as anti-poverty programs aimed at families.

The Risk Assessment Instrument (RAI), developed by the New York City Office of the Criminal Justice Coordinator in conjunction with the Vera Institute of Justice, provides Family Court judges with an objective metric designed to determine the appropriate level of punishment, ranging from release to detention. The RAI considers a number of factors, including prior juvenile delinquent adjudications, probation and arrest history, school attendance, whether the youth has a responsible supervisor, and whether the top charge is a felony or larceny.²⁷ The Risk Assessment Instrument recommends that lowrisk youths remain in the community while their cases are pending, that moderate-risk youths participate in community-based alternatives to detention, and that only high-risk youths be sent into detention.²⁸ The RAI makes a non-binding recommendation, and Family Court judges have the ultimate discretion to either follow its recommendation or to disregard when necessary.

The Department of Juvenile Justice (DJJ) operates the Release to Parent Initiative (RTP). Under Release to Parent, DJJ diverts low-risk youths, admitted into DJJ custody by the NYPD, from pre-trial detention by releasing them to their parents.²⁹ Low-risk juvenile delinquents are issued a Family Court Appearance Ticket (FCAT) rather than detained until Family Court opens, as would have happened before.³⁰ Comparable to the Risk Assessment Instrument, this initiative aims to reduce pre-trial detention among those who pose little or no risk to public safety. By releasing children to their parents, the city recognizes the savings associated with detaining a low-risk juvenile delinquent before a Family Court judge even adjudicates the charge.

While the Risk Assessment Instrument and Release to Parent Initiative both attempt to provide means to prevent youths from unnecessary detention, the New York City Department of Probation, in coordination with the Vera Institute of Justice, developed the Esperanza/Hope program. Esperanza provides counseling and other services to youths and their families in their homes rather than placing youths in OCFS facilities. Esperanza program officers meet with youths and parents in their homes to establish a set of graduated punishments designed to discourage truancy, curfew, and other program violations.31 Program administrators expect Esperanza to reduce the number of youth placed in state facilities, provide significant savings to the city, and reduce recidivism rates among program completers.³² In 2007, Esperanza spent \$4.2 million to treat 160 youths, which equals about \$26,250 per youth.33

New York City Administration for Children's Services (ACS) runs the Juvenile Justice Initiative (JJI), which targets medium-risk repeat offenders by providing therapy and treatment services in the youth's home in lieu of costly and ineffective OCFS-run facilities.³⁴ Officers from the Department of Probation monitor probation terms and youths' home and school activities.³⁵ Implemented in February 2007, ACS estimated 275 youths completed the program's treatment and that only 35 were re-arrested during the program's first year.³⁶ Budgeted at \$11 million annually, ACS expects to serve up to 550 youths annually through the III, 380 in alternatives to detention and incarceration, and 170 in aftercare programs for youths returning from state placement, for an average of \$20,000 per youth.³⁷ Both

Esperanza and JJI remain substantially cheaper than either city detention or state placement.

Much of what New York City administrators decide in the realm of juvenile justice forces the hand of decision makers in Albany. Recognizing the long-term social benefits of reduced recidivism and the short-run cost savings, New York City has developed a number of alternatives to detention and alternatives to incarceration under the Bloomberg administration (in addition to other progressive juvenile justice reforms), and, as a result, has reduced the number of children placed in OCFS facilities by 30% during the past six years.³⁸ Because such a large portion of the OCFS-held population originates within New York City, this drop in the City's state-placed youths was no doubt a principal factor in the state's excess capacity.

THE ECONOMIC ENGINE DRIVING JUVENILE JUSTICE

Although alternatives to detention and incarceration cost less and typically lead to lower recidivism rates among youth participants, New York continues to spend millions to incarcerate non-violent juvenile delinquents—primarily due to the prison economy in regions of upstate New York. The millions of dollars that taxpayers spend to incarcerate youths provide salaries to juvenile prison employees, and OCFS prisons are among largest employers in some upstate counties. If the prisons closed without replacement job opportunities, many in those communities would be unemployed. In addition, counties and municipalities heavily dependent upon prison jobs might experience potentially devastating declines in local income and sales tax receipts. Rather than see valuable jobs leave their districts and the local tax base

DETENTION AND INCARCERATION COST LESS AND TYPICALLY LEAD TO LOWER RECIDIVISM RATES AMONG YOUTH PARTICIPANTS, NEW YORK CONTINUES TO SPEND MILLIONS TO INCARCERATE NON-VIOLENT JUVENILE DELINQUENTS—PRIMARILY DUE TO THE PRISON ECONOMY IN REGIONS OF UPSTATE NEW YORK.

decimated, local politicians fight hard to keep facilities open (even empty ones).³⁹ The disconnect between the incarcerated and voters provides no incentive for local politicians to close facilities, especially when parents of incarcerated children vote in other districts, if they vote at all.

Communities have a perverse incentive to place youths in OCFS-operated facilities rather than provide alternatives to detention and incarceration. Currently, New York pays half of the costs of OCFS placement and local pre-trial detention but provides no matching funds for alternatives to detention or alternatives to incarceration. During the fiscal 2009 budget process, OCFS proposed eliminating the state match for pre-trial detention in local facilities, which would have forced local governments to fully fund the costs of detaining their children before trial.⁴⁰ However, counties and municipalities successfully lobbied state legislators to remove the proposed elimination from the adopted budget. Even if the state fully funded ATD and ATI programs, OCFS would save millions simply because alternatives to detention and incarceration cost so much less than placement. Instead of spending between \$140,000 and \$200,000 to incarcerate a youth for a single year, OCFS could provide ATD and ATI for roughly \$17,000 per youth per year, which is about what New York City spends per youth for its ATD and ATI programs.41

In addition to the elimination of the 50% state match for pre-trial detention costs, OCFS proposed closing six juvenile justice facilities as part of its share of the state's fiscal 2009 executive budget, none of which housed the state's most violent juveniles. In her comments to the media, the public, and the State Legislature, OCFS Commissioner Gladys Carrión framed the closure of the facilities as "right-sizing," and made a public commitment to address job losses in communities affected by closures. Additionally, Carrión proposed spending the \$16 million in expected savings to provide additional services to youths in placement and to support communitybased alternatives to detention and incarceration. She emphasized that, based on current recidivism rates, incarcerating children in New York increases the chances that youths will re-offend, while noting the successes of ATD and ATI programs elsewhere. She said even with the proposed closures, the system was flexible enough to support a spike in juvenile

delinquency. Her argument hinged on children and public safety rather than cost savings, so when state legislators reinstated funding for three of the six facilities, Carrión's arguments helped portray her adversaries as incorrigible politicians bent on saving local jobs rather than serving the state's children. 42, 43 Her arguments allowed juvenile justice advocates, newspapers, and other politicians to berate state legislators as fiscally irresponsible with precious tax dollars in a tight budget year. 44, 45

POLICY RECOMMENDATIONS

Merely highlighting the problems with New York's current juvenile justice model is not enough. To effect substantive change, New York must take specific action designed to reduce its dependence on institutional facilities and begin to favor less costly, more effective alternatives to detention and alternatives to incarceration programs. In addition, the vast racial disparities among New York's incarcerated youth must be addressed, even though the issue of racial injustice likely spans numerous state programs and agencies, as well as municipal governments and local police departments. Finally, New York is one of only two states (North Carolina is the other), that tries youths older than 16 years of age as adults. This, too, must be remedied.

Reduce or eliminate the state reimbursement for pre-trial detention, and provide matching funds for alternatives to detention and alternatives to incarceration. Every time a community sends a youth into local detention, the state reimburses half of the costs, providing a severe disincentive for communities to implement and fully fund programs to divert children from the juvenile justice system. As long as New York does not provide matching funds for ATD and ATI programs, local governments can more easily eliminate whatever negligible funding they have allocated for ATDs and ATIs, rather than cut spending for pre-trial detention when they are reimbursed at 50%. If the state fully abolished or reduced the match for pre-trial detention in favor of a significant match for diversion programs, New York would provide an incentive for communities to view beds as scarce resources; communities would be forced to treat pre-trial detention as other economic decisions—based on costs, benefits, and willingness to pay. Communities (and more importantly, judges) might be more inclined to provide alternatives to detention and incarceration for the vast majority of

youths, most of which are non-violent delinquents, and pay to incarcerate only the most serious offenders. In addition, the more communities spend providing community-based solutions, the less they have to spend on incarceration in the long run.

Continue to reduce capacity throughout the state, as youths are diverted from the juvenile penal system. Even without state matches for alternatives to detention and alternatives to incarceration, communities are beginning to realize the substantial cost savings associated with reducing incarceration and pre-trial detention among youths. Providing dedicated funding for ATD and ATI programs should slow the flow of juveniles in detention and placement until only the most violent juvenile offenders remain. As more youths are diverted from detention and placement, OCFS should continue closing facilities and consolidating the system, beginning with facilities furthest from New York City, since most incarcerated children reside in the city. Savings associated with facility closures should fund alternatives to detention and incarceration programs around the state; savings should also fund increased services to youth in placement and detention, such as mental health treatment and education services. Reducing capacity serves as another measure aimed at forcing communities to view beds as scarce resources. In the absence of excess capacity, New York can no longer over-incarcerate low-level juvenile delinquents.

Address racial disparities in juvenile justice, both in New York City and the state. African-American and Hispanic youth comprise 86% of the incarcerated population in New York State and 95% of the detained population in New York City. 46 Yet African-Americans and Hispanics each represent less than a quarter of the total population in the state, and about one-quarter of the total population in New York City. 47 Even if police arrest children of color more frequently, youths who commit similar offenses should have equal chances of entering the system. Instead, white children are diverted at much higher rates. 48 If New York wants to seriously reform its juvenile justice system, it must address racial disparities.

Increase the age of adult criminal responsibility from 16 to 18 in New York, as 48 other states have done. New York City Department of Juvenile Justice officials worry that adjudicating 16- and 17-year olds

66 NEW YORK AND ITS MUNICIPALITIES SHOULD VIEW BEDS IN DETENTION AND PLACEMENT FACILITIES AS SCARCE RESOURCES.

in Family Court will overwhelm the system; they may be correct. But New York and its municipalities should view beds in detention and placement facilities as scarce resources. Bringing more children into the Family Court system would force judges to prioritize and order incarceration exclusively for youths that pose a significant threat to society. Youths below voting age that commit misdemeanors should not be tried in adult courts and held in adult prisons, especially when evidence has shown reduced recidivism among juveniles tried as juveniles. 49 Studies have consistently shown that juveniles who enter the adult prison system as youthful offenders are more likely to re-enter society with a peer group of hardened criminals and are more likely to re-offend as violent criminals than are youths tried in Family Courts and incarcerated in juvenile facilities. Most other states reserve the right to waive youths above 13 into the adult criminal system for the most violent offenses; presumably New York would do the same. Youths in adult prisons are also at increased risk of sexual assault or physical abuse when compared with youths held in age-appropriate facilities.⁵⁰

CONCLUSION

Although she was unsuccessful at reducing or eliminating the state match for juvenile pre-trial detention, Commissioner Carrión was successful in convincing state legislators to close three of the six proposed facilities in fiscal 2009, and in making system-wide institutional reform a state priority. In September 2009, Governor David Paterson announced a Task Force on Reforming Juvenile Justice to examine ways to reform the juvenile penal system. The Task Force, which includes juvenile justice experts and advocates from around the state, will develop a "strategic blueprint" to reform the system, and will examine alternatives to detention and incarceration, reentry policy, and provision of mental health and substance abuse treatment for incarcerated youth. The Task Force has also been charged with addressing the racial disparities in New York's juvenile justice system.⁵¹

Commissioner Carrión said she will continue to push for system-wide capacity reductions in upcoming fiscal years, and indeed she has. In the fiscal 2010 Executive Budget, all three of the unclosed facilities in the fiscal 2009 budget are slated for closure in January 2010, along with additional facilities. Together, OCFS estimates these facilities are 63% vacant and that closing the facilities will save New York State \$26 million in fiscal years 2009 through 2011.⁵² In addition, juvenile justice advocates plan legislation, called ReDIRECT New York, that creates a higher state match for alternatives to detention and incarceration than the current match for pre-trial

detention.⁵³ With a projected budget deficit of \$15 billion, the state's budget is more dire in fiscal 2010 than fiscal 2009; nevertheless, when Albany passes the budget in April, OCFS might expect the state legislature to seek other cost savings measures rather than close prison facilities in upstate communities. But without closing facilities or cutting services, OCFS will likely have a difficult time providing a dedicated funding match for alternatives to detention and alternatives to incarceration around the state. That funding is critical if New York truly intends to shift toward alternatives to detention and incarceration, and away from incarcerating youths.

APPENDIX A: GLOSSARY OF TERMS 54, 55

Adjustment: occurs when probation officers decide the a juvenile's case lacks severity and dismiss the case from formal court procedures.

Adjudication: the legal category applied by courts which regulates the types of settings in which a youth may be served.

Alternatives to detention (ATD): community-based programs that provide treatment and services to youths within their communities in lieu of detention. Only juvenile delinquents are eligible.

Alternatives to incarceration (ATI): community-based programs that divert youths from court-ordered placement in OCFS facilities. Only juvenile delinquents are eligible.

Detention: temporary custody of youths in locallyrun facilities, either secure or non-secure.

DJJ: New York City Department of Juvenile Justice. Neil Hernandez, Commissioner.

DOP: New York City Department of Probation. Martin Horn, Commissioner.

Juvenile delinquent: youths aged 7 to 15 who commit non-violent offenses considered criminal offenses in adult court.

Juvenile offender: 13- to 15-year olds charged with violent criminal acts, tried in adult courts (Criminal Courts), not eligible for community-based alternatives to detention or incarceration.

Limited-secure: juvenile facilities fenced and continually locked but lacking security hardware.

Non-secure: juvenile facilities lacking fences and security hardware, unlocked, similar to group homes.

NYPD: New York City Police Department. Ray Kelly, Commissioner.

OCFS: New York State Office of Children and Family Services. Gladys Carrión, Commissioner.

Placement: court ordered, longer-term incarceration during which children go into state-run, facilities of varying security levels.

Police admit: occurs when police or juvenile justice officers hold the alleged juvenile delinquent in detention after arrest until Family Court opens.

Secure: juvenile facilities surrounded by fences, locked at all times, and contain security hardware.

Youthful offender: 16- to 18-year olds prosecuted in Criminal Court and housed in adult prisons.

NOTES

- "Promoting Security for Children and Families: Juvenile Justice and Opportunities for Youth," 2008-2009 New York State Executive Budget.
- "Empty Beds, Wasted Dollars: Transforming Juvenile Justice," New York State Office of Children and Family Services (OCFS), revised March 2008.
- "Promoting Security for Children and Families: Juvenile Justice and Opportunities for Youth," op. cit.
- Racial and ethnic delineations provided by OCFS data.
- 5. "Empty Beds, Wasted Dollars: Transforming Juvenile Justice," op. cit.
- "Selected Characteristics of Youth Entering and Leaving OCFS Custody Jan. 07 – Mar. 07 or in Custody on March 31, 2007 and the Same Periods Last Year," New York State Office of Children and Family Services, 2007.
- 7 Ibid
- "Characteristics of Admissions to OCFS Custody, 1997-2006," 2006
 Annual Report, New York State Office of Children and Family Services Division of Rehabilitative Services, 2006.
- 9. "Empty Beds, Wasted Dollars: Transforming Juvenile Justice," op. cit.
- 10. See Appendix A: Glossary of Terms
- See Appendix A: Glossary of Terms.
- 12. Ibid
- 13. "Youth Justice Overview," Vera Institute of Justice, December 2006.
- "Youth Confined in OCFS Facilities," The Correctional Association of New York, November 2007.
- 15. "Empty Beds, Wasted Dollars," op. cit.
- "Promoting Security for Children and Families: Juvenile Justice and Opportunities for Youth," op. cit.
- 17. "Empty Beds, Wasted Dollars: Transforming Juvenile Justice," op. cit.
- Jason Beaubien, "Missouri Sees Teen Offenders as Kids, Not Inmates," All Things Considered, National Public Radio, October 30, 2007.
- Matthew Franck, "Juvenile Justice in Missouri Serves as Model for Nation," *The St. Louis Post-Dispatch*, October 6, 2003.
- "The Right Model for Juvenile Justice," Editorial, The New York Times, October 28, 2007.
- 21. "Youth Confined in OCFS Facilities," op. cit.
- Mayor's Management Report: Department of Juvenile Justice, City of New York, Fiscal 2007.
- 23. See Appendix A: Glossary of Terms
- "The Rising Cost of the City's Juvenile Justice System," New York City Independent Budget Office, December 2007.
- "Juvenile Detention in New York City," The Correctional Association of New York, November 2007.
- "Alternatives to Jail Programs for Juveniles Reduce City Costs," New York City Independent Budget Office, July 11, 2006.
- 27. "The Rising Cost of the City's Juvenile Justice System," op. cit.
- 28. Ibid.
- 29. Ibid.
- 30. Ibid.
- 31. Ibid.
- 32. "Youth Justice Overview," op. cit.
- 33. "The Rising Cost of the City's Juvenile Justice System," op. cit.
- Kaufman, Leslie, "A Home Remedy for Juvenile Offenders," The New York Times, February 20, 2008.
- "ACS Juvenile Justice Initiative." Internal document provided by the Juvenile Justice Committee of the New York City Council.
- 36. Kaufman, Leslie, op. cit.
- 37. "The Rising Cost of the City's Juvenile Justice System," op. cit.
- 38. "Fiscal 2009 Preliminary Budget Hearings: Committee on Juvenile Justice," Internal Document of New York City Council Committee on Juvenile Justice, March 2008.

- Irene Jay Liu, "Juvenile Justice Policy in Flux: Fear of Losing Jobs By Closing Upstate Youth Facilities Keeps Them Open—At a Hefty Price," Albany Times-Union, March 23, 2008.
- 40. "Promoting Security for Children and Families: Juvenile Justice and Opportunities for Youth," op. cit.
- 41. Jim Dwyer, "About Our Town: The Juveniles are Gone, Yet the Jails Remain," *The New York Times*, March 26, 2008.
- "The High Price of 'Getting Along," Editorial, Schenectady Daily Gazette, April 4, 2008.
- 43. "New Day, Line by Budget Line," Editorial, *The New York Times*, March 27, 2008.
- 44. Liu, op. cit.
- 45. "Pork Trumps Sense," Editorial, Staten Island Advance, March 20, 2008.
- 46. "Juvenile Detention in New York City," op. cit.
- "State and County Quick Facts," United States Census Bureau, Data derived from 2000 Census Data.
- "Rethinking Juvenile Detention in New York City," Correctional Association of New York, March 2002.
- Alexandra Marks, "States Rethink Trying Juveniles as Adults," The Christian Science Monitor, March 22, 2007.
- 50. "Back Where They Belong," Editorial, The New York Times, July 5, 2007.
- "Governor Paterson Announces Task Force on Transforming New York's Juvenile Justice System," New York State Office of Children and Family Services, September 10, 2008.
- "Governor Paterson's Executive Budget Lays Foundation For Streamlining, Right-Sizing, and Reforming State Government," New York State Executive Budget, December 18, 2008.
- Interview with Mishi Faruqee, Director of the Juvenile Justice Project of the Correctional Association of New York, April 29, 2008
- 54. "Characteristics of Admissions to OCFS Custody, 1997-2006," op.cit.
- 55. "The Rising Cost of the City's Juvenile Justice System," op. cit.

WATER AND CLIMATE CHANGE SECTION

INTRODUCTION

his section is devoted to the developing policy dialogue on water issues facing our planet. As future policy makers who will deal with a changing planet that will be overwhelmed with a booming population, dwindling resources, and a changing climate, we must start to articulate these policies. Water and climate change concerns will become defining issues over the coming decades.

The following papers represent water policy from two different perspectives. "Race to the Bottom: Indulgent Use and Scarcity of Water Resources in the American Southwest" focuses on a political analysis of how diverse constituencies and rigid power structures influence competition for water from the Colorado River. "Climate Change and Water Distribution in Quito, Ecuador" places greater emphasis on an environmental analysis of the physical limitations of the water source. Both are compelling analyses that bring to light the monumental challenges that the next generation of public servants will face both domestically and internationally as they work toward creating a planet with sustainable and equitable water supplies.

Special thanks for this section go to Melissa Husby for tackling the Herculean task of synthesizing the two distinct works regarding San Diego and Las Vegas water use to create one cohesive and fascinating analysis of the Colorado River basin. Her talent in bringing out the best in the teams of writers is obvious in the final piece and we are grateful for her dedication.

RACE TO THE BOTTOM:

INDULGENT USE AND SCARCITY OF WATER RESOURCES IN THE AMERICAN SOUTHWEST

MIKELLE ADGATE, KATHLEEN APLTAUER, MARGARET DELLA, DEA DENISON, TANTI LIESMAN, SAUMYA SARA PUTHENVEETTIL, LYNN PYFER, COURTNEY WOLF, CARRIE WOOD, AND SUZANNE ZUPPELLO

ABSTRACT

onflict over access to the water in the Colorado River is

nearly a century old. Today demand for water far exceeds the supply available, and political tensions among constituents—both across the region and across the nation—cloud the true ecological capacity and limitations of this region. Rather than creating economic incentives to reduce demand for water, policies managing water distribution and rights exacerbate the struggle over this scarce resource, encouraging further overuse. Throughout the Colorado River Basin, the true costs of water sourcing are not reflected in water prices, leading to water use that is impractical and borders on irresponsible. Climate change models predict increased variability in water supply, and as temperatures rise and precipitation patterns change, year-round or seasonal drought conditions in the Colorado River Basin may worsen, giving rise to the potential for increased conflict. Poor resource management is accelerating the water crisis and the ecological conditions that create water scarcity. Key players in the region must come to the table to look for comprehensive, long-range solutions that consider not just current but future need—need governed by both future population growth and climate change. This paper will explore these issues and dynamics by examining case studies from two Colorado River Basin regions: San Diego and the Imperial Valley, California, and Las Vegas, Nevada. We conclude by offering recommendations for addressing the political and institutional frameworks that contribute to the ecological threats facing the Colorado River Basin.

INTRODUCTION

Conflict over access to the water in the Colorado River is nearly a century old. Today demand for water far exceeds the supply available, and political tensions among constituents cloud the true ecological capacity and limitations of this region. Power and influence vary locally, regionally, and nationally, according to which groups of water consumers have the tightest grip on local, state, regional, and national politicians and water management organizations. Politics determine which constituents will be given priority use of this scarce resource and how much water they will be allowed to consume. Constituents and political players are focused on securing water rights today, often at the expense of future water supplies.

The Colorado River Basin covers seven states and Mexico—more than 240,000 square miles—and supplies water to 30 million people. Today, most of the river is managed, strewn with dams (including the Hoover and Glen Canyon) to control flooding, store water, and produce electric power. Highly variable in flow, the Colorado used to flood regularly, depositing and gathering silt to produce a delta in the Sonoran Desert on the Gulf of California. Although only 8% of this once-flourishing delta now remains, it is still a major ecological resource.²

Created by an act of Congress, the 1922 Colorado River Compact apportioned ownership of the river's water between the basin states.³ Its details have been contested and adjusted throughout the years, but for the most part, this precedent continues to dominate ownership and distribution of Colorado River water. Eighty percent of the Colorado River goes to agricultural use, and the pricing of the water reflects the bias of historical use: agricultural users pay far less per square foot of water than urban users. However, skyrocketing population growth in urban centers and the increased water demand that accompanies this growth has created a clash between agricultural and urban demands for water.

From what was once thought to be a limitless resource, today demand for Colorado River water clearly exceeds its supply. But regional and local water authorities are not reacting to the situation effectively, failing to plan and implement conservation measures adequate to handle even the most recent drought conditions that have been occurring since the 1990s. Authorities have also failed to assess the true costs of water sourcing properly. By setting water prices artificially low, they have encouraged water use that is impractical and borders on irresponsible.

Source: MacDonald, et al., 2005, 51.

California

Califo

Figure 1: Map of Colorado River basin

THE WAGNER REVIEW ■ 24

FROM WHAT WAS ONCE THOUGHT TO BE A LIMITLESS RESOURCE, TODAY DEMAND FOR COLORADO RIVER WATER CLEARLY EXCEEDS ITS SUPPLY.

Increased ecological variability and poor water management are exacerbating water scarcity, and the lack of a realistic strategy for current water sourcing makes planning for long-term impacts of climate change even more difficult. Climate change models predict increased variability in water supply, giving rise to the potential for increased conflict over this scarce resource. In one stark example of climate change, San Diego County is currently experiencing the highest levels of drought since 1801. The Sierra Mountains snow pack that feeds the Sacramento Delta is at a twenty-year low, and the Colorado River Basin also suffers from historic drought. The warmer temperatures and increased variability of rainfall associated with climate change will produce even greater variability in water flow, both seasonally and from year to year.4

OVERVIEW OF THE SAN DIEGO AND IMPERIAL VALLEY CASE

According to the Colorado River Compact, California is entitled to only 4.4 million acre-feet of river water each year. Even so, it currently takes approximately 5.2 million acre-feet per year. Three-quarters of California's Colorado River allocation (equivalent to one-fifth of the entire Colorado River watershed) goes toward agricultural uses in the Imperial Valley. The valley's water supply is regulated by the Imperial Irrigation District (IID), a community-owned energy and water district that operates and maintains more than 3,000 miles of canals and drains. The IID was established by the State of California and holds legal water rights to the Colorado River.

However, most political and economic power over the supply and distribution of Colorado River water in California is held by its State Water Project, which can force the IID to give up some of its allocation. In 2003, the US Secretary of Interior threatened to transfer water from the IID to the nearby county of San Diego without compensating the IID for its loss. The resulting Quantification Settlement Agreement

(QSA) presented some drastic changes to the Colorado River Compact's ownership precedents. Under pressure from the federal and state government, and in order to keep from losing all control over its water, the IID "volunteered" to transfer water from its agricultural fields to urban San Diego.⁷

These water transfers were meant to curb Southern California's overdependence on the Colorado River, specifically by returning California's water allocation to its original entitlement from the 1922 Colorado River Compact through a series of voluntary agriculture-to-urban water transfers. This had become necessary because of increasing water needs in San Diego County, which had jumped in population during the last three decades. Urban development is expected to continue, and conservative estimates forecast that 3.8 million people will live in the county by 2020. This growth has created a spike in demand for water and energy in order to support the region's \$157 billion economy, but that water must be imported. San Diego County has been described as "incapable without outside help of sustaining even a tiny fraction of its current population."8

Historically, San Diego County's Water Authority has imported 75% to 95% of its water from the Colorado River and the Sacramento Delta, but over time, legal restrictions protecting fish and wildlife have greatly decreased the Water Authority's access to the delta. As of 2000, 59% of San Diego's water came from the Colorado River. The county purchases this water at a tiered rate from the Metropolitan Water District of Southern California. The remainder of San Diego's water is supplied through rainfall, recycled wastewater, and ground water, but annual summer droughts often jeopardize such sources.

In the first year that the QSA was in effect, San Diego received 10,000 acre-feet of water from the IID. By 2007, San Diego County was receiving 50,000 acre-feet of water per year, enough to meet the annual needs of 100,000 families of four. Water transfers should reach 200,000 acre-feet of water per year for approximately the next 75 years.¹¹

OVERVIEW OF THE LAS VEGAS CASE

Nevada's annual allotment from the Colorado River is 0.3 million acre-feet per year, which provides nearly 90% of the state's water resources. Almost all of this

water goes to ranching and agricultural industries in the state's rural areas, which dominated Nevada's economy early in the state's history.

With approximately 4.17 inches of rainfall per year, the Las Vegas Valley is quite arid. It currently receives only about 3% of Nevada's annual Colorado River water allocation. This figure seems small, but represents a significant increase over the last half century, rising in tandem with the city's population. Las Vegas is home to nearly one-quarter of Nevada's population. From 1912 to the 1960s, the population of the Las Vegas Valley jumped from 1,000 to 260,000, increasing water demand by more than four times. The population has increased by 84% since 1990. 12

Las Vegas's recent history of water rights acquisition is a story of growth and power rather than one of moderation and conservation. Rigid river apportionments set by the Colorado River Compact have led regional water authorities to seek ways to stretch their apportionments and find alternative means of securing water resources. In 1991, seven independent local water agencies formed the Southern Nevada Water Authority (SNWA), a move that represented both an acknowledgment of the need to address water sourcing issues on a regional scale and a consolidation of political power in the region. The federal government officially transferred all water management operations in southern Nevada to the SNWA in 2001. Since that time, the SNWA has managed water infrastructure and quality and set water restrictions and prices for the region, including Las Vegas.

As a regional authority, the SNWA has been able to acquire new land and water resources with little resistance; other municipalities and organizations lack the funds and power to counter acquisitions. In Las Vegas, securing water rights means acquiring them from neighboring counties. Nevadan municipalities and counties compete with neighboring counties to purchase land rights and some find themselves engaged in unending legal broils over unallocated rights. In Nevada, Lincoln County forged a partnership with Vidler Water Company, which has become the largest landowner in the state. After the partnership was legally challenged, Nevada's state legislature authorized private companies to partner with local municipalities and governments for the

purpose of reducing the potential for such companies to sell water for a profit. ¹⁵ Critics believe this legislation has opened the floodgates for privatization and subsequent sale of water resources in cashstrapped rural municipalities to urban Las Vegas and other southwestern cities.

As Las Vegas's population continues to grow, so will its demand for water resources. Still, SNWA's portfolio is growing. SNWA's financing scheme for system improvements and water procurement is heavily linked to real estate development. Developers must pay an impact fee to fund water procurement and infrastructure. The SNWA has repeatedly relied on these impact fees, as well as contributions from wealthy developers, to leverage significant power and push through infrastructure projects that arguably serve predominantly to promote continued unsustainable growth. For example, in the late 1990s the SNWA embarked on a new infrastructure expansion, the South Valley Lateral pipeline. Despite criticism that such infrastructure would only enable new growth, the \$160 million project was completed in 2001 and a new multi-million dollar expansion project is planned for the area. 16 Subsequently, SNWA must acquire more land and water rights across the state, fueling intra-state conflict and exacerbating scarcity.

COMPETITION BETWEEN RURAL AND URBAN CENTERS

Patterns of use and competition over water are remarkably similar throughout the Colorado River Basin, including Southern California and Las Vegas. Historically, rural pursuits such as agriculture and ranching have received the most water, but exponential growth in the urban centers over the last fifty years has created a push for redistribution. Government mandates to conserve water are few, and overuse is common.

HISTORICALLY, RURAL PURSUITS SUCH AS AGRICULTURE AND RANCHING HAVE RECEIVED THE MOST WATER, BUT EXPONENTIAL GROWTH IN THE URBAN CENTERS OVER THE LAST FIFTY YEARS HAS CREATED A PUSH FOR REDISTRIBUTION.

The Imperial Irrigation District is located in the Imperial Valley of southeastern California, between the Colorado River and the Salton Sea. 17 With an average rainfall of only three inches, the Imperial Valley's rich agricultural sector thrives on a vast supply of irrigated water from the Colorado River; 98% of IID water is used for agriculture. 18 Large agricultural subsidies support and influence local agricultural production.¹⁹ But while the Imperial Valley is among the nation's ten largest agricultural communities, producing nearly \$1 billion in agriculture annually, it is also one of the poorest regions in the United States. In 2006, its 160,301 residents had a per capita income of only \$13,239 and a median household income of \$22,929.20 San Diego County is far more populous and also much wealthier, giving this urban area more social and political power to influence the Imperial Valley's access to water.²¹ In 2006, the nearly 3 million residents of San Diego had a per capita income of \$22,929, and the median household income was \$51,939. Although California and the rest of the US rely on the agriculture produced in the IID, San Diego's monetary power holds greater weight in the fight over water from the Colorado River, as evidenced by the outcome of the QSA.

Water allocation for rural and urban consumers is a particular source of tension in Nevada as well, where gaining new water sources for Las Vegas often depends on driving a wedge between urban and rural consumers. High-powered land acquisition cases utilize equity and moral arguments, which are often derived from a legal precedent established by the 1922 US Supreme Court case Wyoming vs. California. The case ruled for a "first in time, first in right" presumption of priority for Western water use, and tends to be interpreted in favor the agricultural and rural uses of water as these populations were there "first." The conflict between rural agriculturists and urban populations has been egregiously oversimplified and framed as a culture and lifestyle clash: the "gluttony, glitter, girls, and gambling" of the city versus rural "children, cattle, country, and church." Meanwhile, real environmental costs of water rights battles are ignored.

Moreover, allocations of water resources within Nevada to agricultural users are inflated by agricultural subsidies and other federal policies. Agriculture and ranching account for only 0.2% of the state GDP.²² Rural communities make up only a

small fraction of the population but use 75% of the water resources for agricultural irrigation and ranching needs. Moreover, Las Vegas has the largest population, welcomes over 40 million visitors annually, and is the economic driver of the state but uses only 3% of Nevada's water resources.²³

AGRICULTURE AND FEDERAL POLICY

The agricultural subsidies of Nevada and California are part of a larger national bundle of federal protectionist measures that functionally shift global agricultural production. Employed by the US since the 1920s, these subsidies distort the natural comparative advantages of other countries. They enable US farmers and agribusiness to artificially dominate international trade in several water-thirsty staple crops, including alfalfa and cotton. Through these agricultural exports, the US effectively sends one-third of its freshwater resources to other countries, more than any other nation in the world. This concept of "trading" water resources via the import and export of goods that require water in their production, such as agricultural goods, is known as the "virtual water trade." When agricultural goods grown in some of the most water-stressed regions of the country are exported for consumption elsewhere, the US faces a net loss in water. This loss of resources is especially frustrating when one considers that agricultural exports produce less than one-quarter of 1% of the national GDP.²⁴ The artificial advantage of US farm exports creates a self-reinforcing cycle wherein global demand for cheap food staples increases water demand by agricultural users that operate at artificial prices.

In the Imperial Valley, not only does the federal government provide farmers with agricultural subsidies—increasing the incentive to grow thirsty cash crops—it also subsidizes the water, thereby distorting the true value of water in this desert region. Alfalfa covers 35% of IID cropland, yet alfalfa is a particularly thirsty crop.²⁵ Furthermore, cotton and wheat, also very water-intensive crops, are heavily subsidized. In 2004, cotton subsidies in the Imperial Valley totaled nearly \$8 million, and the subsidies for wheat production were more than \$1.3 million.²⁶ Removing these subsidies may encourage the conservation of water and the planting of more appropriate or more valuable crops. Although the QSA aims to halt wasteful agricultural practices while promoting water conservation, in part by requiring

water transfers from Imperial Valley to San Diego County, the existence of agricultural and water subsidies in the Imperial Valley continue to distort agricultural production.

The consolidation and growth of the SNWA and the rapid growth of the gaming, tourism, and real estate industries in the Las Vegas region exemplify the emergence of new key power players in the region. On the state level, the SNWA runs up against tensions with farmers and ranchers in the rural areas of the state, who consume nearly all of Nevada's water. As the SNWA grows and expands its "portfolio" of water resources throughout the state, it encroaches on the land and water rights of rural Nevadans, mostly farmers and ranchers. But farming and ranching operations are backed by strong agricultural lobbies and considerable federal subsidies.

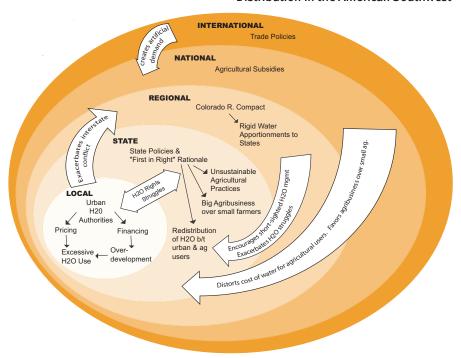
FARM SUBSIDIES ARE THE KEY
POLICIES THAT ENGENDER AND PERPETUATE
UNEVEN WATER ALLOCATIONS BETWEEN
URBAN AND RURAL CONSUMERS AND
ARTIFICIALLY LOW WATER PRICING

FOR FARMING CONSUMERS.

State tax policies and federal agricultural subsidies favor the large agribusiness over the small farmer or rancher. Under these favorable conditions, large agribusinesses buy out small farms and acquire rights to any water on their land. The subsidies and tax policies hereby effectively concentrate the agricultural power in the state.

This state power struggle is exacerbated at the national level as well by members of Congress. While many politicians receive contribution money from the development, real estate, and construction lobbyists, many other congressional representatives are courted by agribusiness. A strong agribusiness lobby contributes substantial money to election campaigns, especially to those politicians who serve on federal agriculture committees. These well-financed conflicting interests create increasing pressure on legislative policy makers who are compelled to make short-sighted decisions in order to maintain power. Farm subsidies are the key policies that engender and perpetuate uneven water allocations between urban and rural consumers and artificially low water pricing for farming consumers.

Figure 2: Power Dynamics Affecting Water Distribution in the American Southwest



VALUING WATER: PRICE AND COST DISTORTION

Overall, the social, economic, and environmental value of water in both the Las Vegas and San Diego/Imperial Valley areas is not reflected in the price for which it is sold. This leads to water use that is less than optimal socially. Socially optimal water use is defined as efficient water use, which enhances the welfare of the greatest number of people without impoverishing anyone. This is achieved as a result of accurate water pricing. From an economic perspective, water and agricultural subsidies and inefficient water pricing artificially increase demand for water, and because water prices do not reflect water's actual value, it is overused, leading to less than socially optimal results. Assigning accurate economic and social values to water will improve the well-being of greater numbers of people, resulting in socially superior water usage.

The QSA entitles California's Imperial Valley to 3.1 million acre-feet per year of Colorado River water. Not only does the federal government provide farmers in the Imperial Valley with agricultural subsidies, but it also subsidizes the water they receive, thereby distorting the true value of water in this desert region.²⁷ Although the IID sells water to its farmers at \$17 per acre-foot, it sells this same water to San Diego County for \$258 per acre-foot, nearly fifteen times more than the farmers.²⁸ It is clear that taking one-fifth of all the water in the Colorado River to nourish water-thirsty crops in the middle of a desert is a good example of water use that may not bring the greatest welfare to the greatest number of people. If used differently, this same water could bring greater benefit to more people.

San Diego's urban consumer water pricing also demonstrates that this precious resource is not properly valued. Within the county, service charges vary little between industrial, agricultural and residential users, and there is little incentive for water conservation as there are only small price increases for larger volumes consumed.²⁹ Las Vegas has an equally impractical water pricing system. Its 1.6 million inhabitants currently use 256 gallons per capita daily, the highest use nationally.³⁰ This area has higher fixed rates and lower per-unit rates than most other arid or semi-arid cities in the American Southwest. The pressures of wealthy developers and the gaming

industry seem to have influenced the SNWA's decisions on important matters such as water pricing, resource acquisition and management, and infrastructure improvements. In catering to these constituencies, the SNWA keeps Las Vegas water prices at some of the lowest rates in the Southwest.

As in San Diego, under Las Vegas's block pricing system, water does cost more per gallon as consumers move up in water use from one "block" to the next, but the changes in pricing between blocks are not nearly enough to encourage conservation. On average, consumers may pay anywhere from \$2.50 to \$11 more per month, which does not discourage excessive consumption to the same degree as pricing in similar water-scarce cities or even water-abundant cities.³¹ For example, Las Vegas consumers would pay \$41.15 for 20,000 gallons, whereas consumers in Tucson and Seattle would pay \$65.53 and \$132.66, respectively, for the same water.³² Moving from one price tier to another in the Vegas pricing scheme does not dramatically increase the amount consumers pay, even for those who use an extremely high quantity of water.

In both San Diego and Las Vegas, the majority of the water consumed does not go toward essential daily use. Instead it goes toward more extravagant purposes. San Diego's per-capita water usage in 2006 was about 180 gallons per day, with 60% of this put toward outdoor uses, such as watering lawns and filling swimming pools.³³ Similarly, in Las Vegas, despite growing public awareness campaigns and incentives for consumer water conservation, the majority of the 59% of municipal water that goes to residential use is used to irrigate lawns and gardens, lost to evaporation or channeled into sewer system runoff.

BY SOME CONSUMERS HAVE EXACERBATED THE SOUTHWEST'S WATER CRISIS BY NOT PROVIDING SUFFICIENT INCENTIVES FOR INDIVIDUALS TO CURB THEIR EXCESSIVE WATER USAGE AND PRACTICE GOOD CONSERVATION MEASURES.

Clearly, the artificially low prices paid by some consumers have exacerbated the Southwest's water crisis by not providing sufficient incentives for individuals to curb their excessive water usage and practice good conservation measures. While the SNWA does have some conservation policies, most are of the "carrot" variety, offering rebates and other incentives for conservation through things like getting rid of lawns or buying low-flow plumbing fixtures. Similarly, in July 2008, San Diego came under a "Stage One Water Emergency," which called for only voluntary efforts to save water; mandatory water conservation by residents or industry is not required until the city declares a "Stage Two Water Alert." 34

CURRENT STRATEGIES FOR DEVELOPING NEW WATER SOURCES

Developing new sources of water has become a priority only in recent years, as the true effects of over-reliance on the Colorado River have become more apparent. Water authorities in both California and Nevada have undertaken a number of different projects toward this end, with varying levels of success and controversy.

In Nevada, the SNWA has acknowledged that Nevada must continue to develop in-state water resources, despite the costs, or risk tarnishing its credibility when negotiating for out-of-state resources. The SNWA taps groundwater supplies to circumvent the constraints of the Colorado River compact. Treated water from the Colorado River flows into the Valley's municipal system, including wells for recharge and production such as its alluvial aquifer (an underground water source). Las Vegas also supplements its remaining demand from ground sources, especially during seasonal peak demand when they can supply upwards of 30% of the city's water needs. 35

The SNWA also draws more than its allotted apportionment from the Colorado, but gets around violating the Colorado River Compact by then treating the water after use and filtering it into Lake Mead, which flows back into the river. The impacts of this practice, known as return-flow credits, are largely unknown, though critics claim the runoff chemically pollutes Lake Mead and downstream. With air temperatures expected to increase in years to come, the major reservoirs at Lake Powell and Lake Mead

are also likely to lose capacity due to increasing evaporation, reducing the quantity of water available in Las Vegas and downstream. Las Vegas has also begun to artificially "recharge" its meager groundwater aquifers with water it receives from the Colorado River, in an effort to stretch its resources and set aside resources for the future.

The attempts of developers in the Las Vegas area to purchase water rights from more rural areas provide a political twist on new resource development strategies, as exemplified by the controversy over a 461-mile-long pipeline in White Pine County. This project proposes to pump up to 200,000 acre-feet of water each year from aquifers in White Pine, Lincoln, and northern Clark counties to supplement the Las Vegas Valley's water supply.

San Diego's water use is predicted to reach 813,000 acre-feet per year by 2020, and when combined with population growth and climate change, this water usage will significantly intensify resource stress in this region. Even so, California has been much less aggressive than Nevada in its efforts to develop new water sources. It has relied primarily on increasing infrastructure to conserve water from its best existing source, the Colorado River. For example, it will manage to conserve 56,200 acre-feet of water per year for the next 110 years by lining the Coachella and All-American Canals; water saved through this project will make up 9% of San Diego's water by the year 2020.³⁶

Because the State of California's Water Code places the highest priority on domestic water use over water used for irrigation, increased water scarcity in the future may well force the IID to sell even more water than it currently does to urban areas, including San Diego.³⁷ This would decrease the farmers' access to water and require farmers to adapt to new and often costly water-conserving irrigation technologies. At first glance, these technologies may seem like a net gain. But while water-conserving irrigation technologies are highly beneficial in many waterscarce regions, in this case they could have harmful side effects on the ecosystem of the Salton Sea, which depends on runoff from the agricultural sector. Overall, both the poor tenant farmers and the richer, owner-farmers in the Imperial Valley face uncertain futures as they are likely to bear the economic costs of adapting to regional water scarcity.³⁸

RECOMMENDATIONS FOR RESOLVING TENSIONS BETWEEN CONSTITUENCIES AND CREATING A SUSTAINABLE WATER USAGE PLAN FOR THE COLORADO RIVER BASIN IN LIGHT OF CLIMATE CHANGE CONCERNS

Federal agricultural subsidies and the Colorado River apportionments are the key legislative constraints on water management in San Diego and Las Vegas. Meanwhile, low pricing structures are the key local constraints to conservation promotion. These constraints combine to induce magnified water scarcity in the region and must be addressed in order to create a realistic long-term water-sourcing plan for San Diego, Las Vegas, and the region as a whole.

Agriculture: It seems that the federal level is where the entrenched power of agricultural interests holds the most sway and is thereby the nexus of tension between rural and urban consumers for both Las Vegas and San Diego. With drought conditions plaguing the California and Nevada and climate change posing additional uncertain risks to ecosystems and hydrological systems in these areas, the US will have to critically reconsider its subsidies in order to safeguard vital freshwater resources for the future. The key conceptual and legal step necessary for adjusting or eradicating these harmful subsidies is unbundling conservation payments, food stamps, and other desirable national programs from the agribusiness subsidies in the Farm Bill. Of course, lobbyists continue to pose a significant institutional barrier to changes to the status quo, but a concerted campaign by equally virile water lobbyists could reframe the subsidies as threatening national water security and severely endangering the economy and populations of the population centers like San Diego and Las Vegas.

As the greatest consumer of water, the agricultural sector offers considerable opportunity for conservation and reallocation. In the case of the Imperial Valley, if the area plants crops that produce higher-value foods that are less water—intensive, they will not only increase water productivity, but will also generate more income.³⁹

New technology: Irrigation technologies, such as soil moisture monitors, laser leveling, and precision

irrigation systems, must be implemented as they offer the opportunity to save water while increasing yield. ⁴⁰ Farmers can recycle clean water by using captured rainwater for supplemental irrigation purposes and by treating agricultural runoff so that it is usable as either potable or grey water. ⁴¹ Processing runoff will not only increase supply, but will also address current environmental concerns over water salinity and pollution from fertilizers and pesticides. ⁴²

Colorado River apportionments: Existing Colorado River apportionments are creating tensions between water users, driving the kinds of drastic shortsighted water management strategies discussed above. The apportionments must be restructured to be flexible, with allocations determined by population trends, actual river flows, and environmental trends, among other factors. This reapportionment plan needs to be part of a regional collaboration among the Colorado River basin states, which should include an aspect of growth management planning.

Changing the Colorado River apportionments may be politically very difficult, but would be easier if a

THE APPORTIONMENTS MUST BE RESTRUCTURED TO BE FLEXIBLE, WITH ALLOCATIONS DETERMINED BY POPULATION TRENDS, ACTUAL RIVER FLOWS, AND ENVIRONMENTAL TRENDS, AMONG OTHER FACTORS.

watershed-level entity for regional growth planning and resource management were formed in order to hold states accountable to a higher level. We recommend designating a conflict negotiator to gather a coalition of climate scientists, researchers, economists and government representatives to share perspectives. Teams will be formed to accomplish different tasks, including running models of the impact of climate change on water availability, and models of population growth and water use. ⁴³ Our recommendations for investigation during this phase fall into three broad categories: water conservation, reallocation of water to achieve the greatest social good, and research into ways in which water supply can be increased and availability smoothed. Both

short- and long-term goals must be established and implemented. This would foster a sense of "we're all in this together" to ensure no single actor could act to the detriment of the others. It may also relieve pressure on politicians by preventing the self-interested state vs. state battles that become virulent pieces of campaign rhetoric in political platforms.

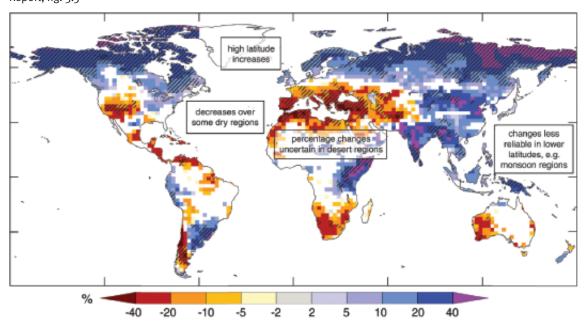
Water Pricing and Institutionalizing

Conservation: The key conceptual and institutional step necessary for adapting the IID and SNWA's water management policies is to incorporate the reality of the region's scarcity by charging higher rates for water consumption. Neither San Diegans nor Las Vegans currently bear the full costs of water pricing nor the full environmental costs of their consumption. Because consumers respond to price incentives, pricing that better incorporates the true costs of water management will discourage wastefulness while encouraging widespread conservation. The IID and SNWA should charge appropriate prices that deter excessive water usage by households and commercial entities, based on careful scientific estimates.

Water-efficient urban planning also requires new approaches to home and landscape design, such as the use of drought-tolerant plants in landscaping, low-flow irrigation systems, and drainage structures that minimize runoff. This approach also requires that permits for new developments, whether industrial or residential, must be granted only when sufficient water is available to support them. Urban users can significantly reduce water usage by switching to water- and energy-efficient washing machines, low-flow plumbing fixtures, and water-saving fixtures such as motion sensor lavatory faucets and waterless urinals. Furthermore, water used in washing and showers can be recycled to flush toilets or water lawns.

Placing the proper value on water will encourage it to be used in ways that produce greater good, both economically and socially. Providing subsidies for water-saving conversions encourages their use, and minimal water use by poor families and small family farms can be subsidized so that their access to water is preserved. In addition, increasing the price of water during periods of low availability can promote conservation during the dry season or drought periods. Finally, because the majority of companies

Figure 3: Projected Changes in Runoff Due to Climate Change Source: Intergovernmental Panel of Climate Change (IPCC) 4th Climate Change Assessment Report 2007, Synthesis Report, fig. 3.5



that generate industrial waste and agricultural runoff are profit-making enterprises, the costs of treating—or not treating—this waste and runoff are borne by society at large; therefore, forcing agriculture and industry to pay for the cost of treating the pollution they create will not only place the cost on the parties to whom it belongs, but it will also encourage conservation and make additional water available for other uses.

Plan for Ecological Changes: As charged with securing future water availability for their respective cities, the IID and SNWA must plan according to long-term time horizons, incorporating current drought conditions and projected climate change-induced realities. The critical piece of planning is understanding how reliance on short-sighted measures will only inflict further environmental costs on water resources across the Southwest. Shortsighted projects are expanding and weak models or overestimations of resources will almost surely exacerbate already-strained natural systems. The IID and SNWA have the responsibility to think beyond short-term gains toward the long-term availability of water to ensure sustained economic growth of both regions.

CONCLUSION

Collectively, and independently, political leaders at all levels must inject environmental concerns into the public discourse to emphasize the severe threat current policies pose to the region's water supply. Clearly, water in both San Diego County and the Las Vegas area is not properly valued, and unless changes are implemented, less than socially optimal water usage will persist in the coming decades. Further complicating this issue is the fact that future climate change scenarios for both regions indicate that the American Southwest will undergo more prolonged periods of drought and will possibly have unpredictable rainfall patterns, which will increase regional water scarcity. Solving these problems requires a high degree of collaboration between diverse actors with varying interests and priorities, and in spite of regional differences for water usage, pricing, and value, both communities must recognize their shared interest in preserving this valuable resource. Local and federal policymakers have not given enough consideration to national dependence on agricultural goods, incentivizing subsidies for such in a water-scarce region, urban planning and urban water usage, especially in light of possible future

THE IID AND SNWA HAVE THE RESPONSIBILITY TO THINK BEYOND SHORT-TERM GAINS TOWARD THE LONG-TERM AVAILABILITY OF WATER TO ENSURE SUSTAINED ECONOMIC GROWTH OF BOTH REGIONS.

climate changes. From the IID and SNWA to the federal government, real, long-term environmental costs of their policies and legislation seem to be distorted or even outright ignored. Instead, power dynamics and water rights acquisitions distract from the acute crisis at hand. Better water management options are, and will increasingly become, limited as the timeline between the present concerns and an acute crisis grows shorter. The IID, SNWA and Congress must act now to correct insufficient water pricing and detrimental water subsidies to ensure the future quantity and quality of the region's water supply.

NOTES

- The Colorado River Basin states are Colorado, Utah, Wyoming, New Mexico, California, Arizona, and Nevada.
- Lellouch, Mark, Karen Hyun, and Sylvia Tognetti. "Ecosystem Changes and Water Policy Choices: Four Scenarios for the Lower Colorado River Basin to 2050." Case Study by the Sonoran Institute, Washington, D.C.: Island Press, September 2007.
 - http://sonoran.org/index.php?option=com_docman&task=doc_download &gid=196&Itemid=74%20- (accessed September 21, 2008), vi, 7, 10, 22, 33-42.
 - MacDonald, Glen, Sigrid Rian and Hugo Hidalgo. "Southern California and the 'Perfect Drought." Colorado River Basin Climate: Paleo, Present, Future. Special Publication for the Association of California Water Agencies and Colorado River Water Users Association Conferences, November 2005,
 - http://www.sscnet.ucla.edu/geog/downloads/634/270.pdf (accessed September 22, 2008), 151.
- 3. In November 1922, the seven Colorado River Basin States met to discuss water ownership of the River. Negotiations ended with all seven states signing the Colorado River Compact, which distributed water equally between the Upper Basin states (Colorado, New Mexico, Utah, and Wyoming) and the Lower Basin (Nevada, Arizona, and California). The states within each basin had the responsibility to determine how the water should be further allocated among them (Gelt 1997, 1).
- Lellouch et al, 40-41; H.A. Loaiciga, "Climate change and ground water," *Annals of the Association of American Geographers* 93.1 (2003): 30-41; Bryan Mark, "Climate and Water Series." NYU-Wagner, New York, NY. November 13, 2008.
 - Annette Semadeni-Davies, "Urban water management vs. climate change: impacts on cold region waste water inflow," *Climatic Change* 64.1-2 (May 2004): 103-126.
- 5. California's appropriation of water was historically one of contention. Even in 1922, the Upper Basin states worried that although California contributed the least to the water supply, its growing population would continue to demand more and more resources. They were right: California expanded its allocation of 4.4 million acre-feet per year by diverting unused water from other Upper and Lower Basin states (Gelt 1997, 1). Today, although increased population growth and drought within California has resulted in increased water shortages, the other basin states will release no more of the river to California, forcing its residents "to live within their water budget" and leading to the 2003 Quantification Settlement Agreement (Perry 2005, B-3).
- 6. Michael Gardner and Mike Lee, "California's Water: A Vanishing Resource, Farming's parched future, Water allocation puts many in bind as drought worsens" Sign On San Diego.com by the Union-Tribune, August 4, 2008, http://www.signonsandiego.com/news/metro/20080804-9999-1n4agwater.html (accessed October 26, 2008); Imperial Irrigation District, "2005 Water Annual Report," http://www.iid.com/Media/2005IIDWaterAnnualReport.pdf (accessed September 24, 2008), 29; Rob Schmitz, "Farmers Battle over Water for California," National Public Radio (NPR), January 22, 2008, http://www.npr.org/templates/story/story.php?storyId=18299690 (accessed September 29, 2008).
- LeRoy W. Hooton, Jr., "Colorado River: Drought and Deadlines –
 Colorado River Water Users Association conferees hear Interior Secretary
 make demands of California to reduce its use of Colorado River water,"
 Salt Lake City Department of Public Utilities,
 http://www.ci.slc.ut.us/utilities/NewsEvents/news2002/news12232002.ht
 m (accessed December 6, 2008).
- 8. Douglas Jehl, "Alchemy or Salvation—Desalting the Sea," Whose water is it? The unquenchable thirst of a water-hungry world. Edited by McDonald, Bernadette and Douglas Jehl, 188-198. Washington, D.C.: National Geographic, 2003, 201-202.
- The Metropolitan Water District is the primary water supplier for Southern California. San Diego County's Water Authority is one of approximately twenty-six members of this consortium.
- 10. Hatch, et al., 8-10.

- San Diego County Water Authority (SDCWA a). "Making Every Drop Count: San Diego County Water Authority Annual Report 2007." http://www.sdcwa.org/about/annual_2007.pdf (accessed October 20, 2008).
- 12. "Census Scope, 2000." www.censusscope.org (accessed March 1, 2009).
- "Divisions over water fuel White Pine recalls" The Las Vegas Sun. April 9, 2004. http://www.lasvegassun.com/news/2004/apr/09/divisions-overwater-fuel-white-pine-recalls/(accessed December 1, 2008).
- "Sandy Valley residents knee-deep in water woes" The Las Vegas Sun. December 23, 2000. http://www.lasvegassun.com/news/2000/dec/23/sandy-valley-residents-knee-deep-in-water-woes (accessed December 1, 2008).
- Erin Neff. "Vidler approved to form water district." The Las Vegas Sun. June 2, 2003. See: http://www.lasvegassun.com/news/2003/jun/02/vidler-approved-toform-water-district/ (accessed December 1, 2008).
- Jeff Schweers, "Water expansion 'purely to promote growth'," The Las Vegas Sun April 26, 1997. See: http://www.lasvegassun.com/news/1997/apr/26/water-expansion-purelyto-promote-growth/ (accessed December 1, 2008).
- 17. The Salton Sea is an inland sea with salinity greater than the ocean, and it creates a habitat that is rich in both wildlife and aquatic species. The survival of this lake depends on the discharge of agricultural water in order to prevent increasing salinity due to evaporation (IID Water Report 2005, 24). Therefore, the Salton Sea relies on runoff from irrigation inefficiencies to preserve its ecology (Hettena 2003, B-1).
- 18. Hatch et al, 10.
- California Department of Food and Agriculture. Executive Summary to "Investing in Agriculture for the 21st Century: 2007 Farm Bill, The California Perspective." http://www.cdfa.ca.gov/farm_bill/pdfs/CAFarmBillExecSummary.pdf(ac cessed March 1, 2009).
- United States Census Bureau. "State and Country Quick Facts." http://quickfacts.census.gov/qfd/states/06/06025.html and http://quickfacts.census.gov/qfd/states/06/06073.html (accessed December 2, 2008).
- 21. Hatch et al, 10.
- Bureau of Economic Analysis (2008). "National Economic Accounts". http://www.bea.gov/ (accessed December 1, 2008).
- 23. Barba, 2007.
- US Department of State. (2008). "USA Economy in Brief." http://usinfo.state.gov/products/pubs/economy-in-brief/page3.html (accessed December 1, 2008).
- University of California Cooperative Extension Imperial County. "Research. Extension & Outreach Projects." University of California. http://ceimperial.ucdavis.edu/Custom_Program275/Research-_Extension_and_Outreach_Projects.htm (accessed October 20, 2008).
- 26. Environmental Working Group (EWG). "EWG 2007 Farm Bill Analysis Database." http://farm.ewg.org/sites/farmbill2007/progdetail1614.php?fips=06000 & progcode=total&page=croptable (accessed October 20, 2008).
- University of California Cooperative Extension Imperial County.
 "Research. Extension & Outreach Projects." University of California. http://ceimperial.ucdavis.edu/Custom_Program275/Research___Extension_and_Outreach_Projects.htm (accessed October 20, 2008).
- 28. Schmitz, op. cit.
- San Diego County Water Authority (SDCWA b) "Survey of Member Agency Water Rates, 2005." http://www.sdcwa.org/about/pdf/member-2005-rate-survey.pdf (accessed October 20, 2008), 41-42.
- 30. Sweet, 2007, op. cit.
- 31. Heather Cooley, Taryn Hutchins-Cabibi, Michael Cohen, Peter H. Gleick, and Matthew Heberger, "Hidden Oasis: Water Conservation and Efficiency in Las Vegas," November 2007. http://www.pacinst.org/reports/las_vegas/hidden_oasis.pdf (accessed December 1, 2008).

- 32 Ibid
- 33. San Diego County Water Authority News/Publications (SDCWA c). "Water Authority Announces '20-Gallon Challenge' for Voluntary Water Conservation: Residents, businesses urged to pitch in to stretch water supplies during historic dry conditions." San Diego County Water Authority. http://www.sdcwa.org/news/2007_0728_20GallonChallenge.phtml (accessed February 26, 2009).
- The City of San Diego's Water Department. "Water Conservation Program." The City of San Diego. http://www.sandiego.gov/water/conservation/ (accessed February 26, 2009).
- 35. Michael Johnson, David Donovan, Erin Cole, Kay Brothers and Gavin Kistinger. "Stop 1: Las Vegas Valley Water District Main Well Field: the North Well Field." Hydrogeology and Geology of the Las Vegas Valley Clark County, Nevada, Field Trip Guide Book for National Ground Water Association, SNWA.
- 36. SDCWA Annual Report 2007.
- 37. Legislative Council for the State of California, Section 106.
- 38. Tanaka et al., op.cit.
- P.H. Gleick, "Water and Energy." Annual Review Energy Environment 19 (1994), 195.
- 40. Ibid., 194.
- 41. Grey water is wastewater that is no longer potable but neither is it highly polluted. Water used for washing or bathing are examples of grey water.
- 42. Identifying the tradeoffs between the pollution created by the energy necessary to run the water processing plants needed to clean the water and the costs of pollution would be part of the dialogue phase. See Gleick 195.
- 43. Based on framework for dialogue and negotiation modeled after the successful efforts

CLIMATE CHANGE AND WATER DISTRIBUTION IN QUITO, ECUADOR

SUHALY BAUTISTA, NUPUR CHAUDHURY, JENNIFER FARMWALD

ABSTRACT

s investments in water and sanitation projects increase, it is imperative to consider the regional effects that climate change will have on water in the future. Regional temperature changes and the subsequent consequences for glacial melt will soon impact the water supply in the city of Quito, Ecuador. This article highlights Quito's current climate conditions, projects the impact that climate change will have on the city's water system and other sectors, and suggests mitigation and adaptation strategies for the future.

INTRODUCTION

Ecuador's capital, Quito, lies in the northern highlands and is part of the Guayllabamba river basin. The city is built on a narrow mountain valley, flanked by the Pinchincha volcano to the West and the Cotopaxi, Antisana, and Cayambe volcanoes to the east. The Guayllabamba, Machángara, Monjas, Pita, and San Pedro Rivers flow within the Guayllabamba river basin and throughout the Metropolitan District of Quito.

Climate in Quito remains fairly constant because of the city's proximity to the equator. Its altitude of 9,200 feet contributes to mild temperatures year-round with an average temperature of 18°C. The average high temperature is 20°C and the average low is 11°C. With relatively stable temperatures, the weather is defined by a wet and dry season, with the wet season falling between October and May and contributing to an annual precipitation of 119 centimeters.¹

Ecuador's climate varies because of two conflicting ocean currents that contribute to El Niño and La Niña. If either of these phenomena overpowers the other, the effects produce powerful variations in precipitation that ripple through Quito, impacting agriculture, industry, and domestic water usage.² Quito and greater Ecuador experienced the effects of nature's unpredictability when, in 1998, natural disasters attributed to El Niño devastated the economy, damaged the agriculture and tourism industries, and caused death and disease.³

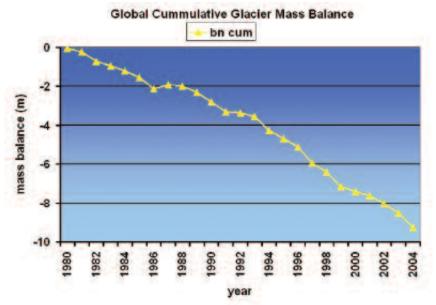
EFFECTS OF CLIMATE CHANGE ON QUITO'S WATER SYSTEM

Quito's potable water and sewage company, Quito Metropolitan Area Sewage and Potable Water Agency (EMAAP-Q), takes advantage of the watershed's rich hydrological endowments and the effects of gravity by capturing volcanic and glacial runoff to supply to

The City of Quito, shown with its surrounding glaciers, a major source of Quito's water Source: www.sangav.com/Quito_region_map.jpg

THESE PHENOMENA
OVERPOWERS THE OTHER,
THE EFFECTS PRODUCE
POWERFUL VARIATIONS
IN PRECIPITATION THAT
RIPPLE THROUGH QUITO,
IMPACTING AGRICULTURE,
INDUSTRY, AND DOMESTIC
WATER USAGE.





Source: http://rs.resalliance.org/2008/03/18/visualizing-glacial-decline/

Quito. Seventy percent of Quito's water comes from surrounding ice caps. EMAAP-Q currently extracts significant amounts of municipal water from glacial runoff.

EMAAP-Q's delivery system in Quito was built to rely heavily on the altitude of Quito's mountainous topography. EMAAP-Q delivers water to Quito through modern pumping stations, collectors, and pipes that are metered. Water is first pumped from the source to water treatment plants that are scattered throughout the city. It is then treated for safe drinking and distributed for commercial and personal consumption.

EMAAP-Q must account for the effects of climate change as it provides water in Quito, as climate change will affect the way in which water is extracted. While climate predictions are difficult to make, snowmelt and glacial retreat projections may be made with relative certainty. In estimating flooding and drought, however, the projection becomes more uncertain. Climate changes indicate that as regional temperatures rise, glaciers will melt and precipitation will decrease. Eventually, Quito will find itself with a reduced water supply and possible flooding and landslides. As climate change impacts temperature

and rain patterns, the water system will reach a state of permanent, irreversible damage.

Ecuador's vulnerability is a result of atmospheric temperature and precipitation changes that are expected to cause a rise in sea level, coastal erosion, and changes in water temperature, salinity, and oxygen properties, as well as flooding and drought.⁶ Most climate change models predict that the climate in the Andean region will become even more volatile, creating a more variable climate. Neighboring countries such as Bolivia, Peru, Ecuador, and Colombia have experienced changes in precipitation levels, increases in temperature, and decreases in water for consumption and hydropower.8 The Andean region's reliance on glacial melt for water is also diminishing as the ice continues to melt. In 1970, glaciers from Bolivia to Venezuela covered 2,940 square kilometers. By 2002, these glaciers had decreased by approximately 17%.9 Experts predict harsher consequences for Ecuador and southern Columbia.10

Climate change models project that an increase of 2-3°C would lead to massive glacial retreat throughout Ecuador. Although melting glaciers may create a short-term increase in water, once the glaciers have

melted completely, there will be a dramatic decrease in water availability. ¹¹ Models further suggest that temperature increases will be twice as great in the Andes as in the surrounding areas, which will impact glaciers and snow pack. ¹² Many believe that these glaciers will disappear completely within the next ten to twenty years. ¹³ A modest assessment of the literature suggests conservative temperature increases from 1° to 4°C or from 2° to 6°C. ¹⁴ To put this into perspective, by 2010, an overall temperature increase of 2°C would result in a water decrease of 421%, when comparing available water to the growing demand of the region. ¹⁵

Research indicates that the consistent shrinking of Antisana's glaciers, Quito's main water source over the past ten years, is due to marginal changes in regional climate. As glacial melt accelerates with temperature increases, snowmelt will accumulate and act as a magnifier of the sun's rays. Snow pack will be permanently heated at a much faster rate, thereby accelerating the melting process. As a result, flooding may occur in populated areas of Metropolitan Quito. It should be noted that flood

66 IF FLOODING OCCURS, IT IS UNCLEAR HOW MUCH WATER WILL FLOW INTO QUITO OR HOW LONG THE FLOODING WILL LAST AS IT DEPENDS ON THE INTENSITY OF THE TEMPERATURE INCREASE AND THE TIME OF YEAR.

levels will depend on the time of year (wet or dry season) and the magnitude of snowmelt. If flooding occurs, it is unclear how much water will flow into Quito or how long the flooding will last as it depends on the intensity of the temperature increase and the time of year. However, if melting occurs during the rainy season, dangerous floods are possible. Further, once the snow melts completely, Quito will be left with depleted water resources. The effects will be worsened by the expected reduction in precipitation that typically accompanies increases in temperature.

Currently, Quito is a relatively wet city. If the glaciers melt completely, it is logical that the city would rely on precipitation as a primary source of water. Unfortunately, as global temperatures increase,

precipitation is expected to decrease in tandem with weather conditions such as El Niño. Climatologists note that the glaciers of the Andean region recede with warm and dry El Niño conditions, a phenomenon that is expected to increase as temperatures rise. Warm temperatures are associated with dry conditions and, thus, as temperatures increase, drier weather patterns are expected. This means less water for Quito from precipitation. In addition, climatologists predict that the frequency of extreme weather events will increase, and making it more difficult for Quito to predict and plan for its future. The warming trend will clearly have major implications for water sourcing.

If the regional temperature continues to rise and the glacial water available to Quito decreases in the coming years, EMAAP-Q and other stakeholders in the water system must plan to adapt to or mitigate these changes. Developing innovative solutions is critical. EMAAP-Q may need to work with MIDUVI, the Ecuadorian Ministry of Housing and Urban Development, a national ministry that oversees water projects and is in charge of providing water to Ecuadorians. It is critical that both EMAAP-Q (in charge of Quito's water supply) and MIDUVI (in charge of the Quito's peri urban and rural water supply) work together to develop innovative solutions.

POSSIBLE CONSEQUENCES

Currently, EMAAP-Q has proposed several ways to expand the existing uses of glacial melt water (i.e.. water diversions and hydroelectric plants in Ecuador using glacial runoff).²¹ In addition, EMAAP-Q is planning a \$700 million expansion of its water capture by tapping the Orientales River for water provision, a project that is scheduled to occur from 2025 to 2050.²² However, infrastructure investments of this magnitude require tremendous capital outlays and allocating funding is not an easy task.

Changes in climate and a reduction of Quito's primary source of water will impact Quiteños, the region's agriculture, and the watershed's political and institutional relationships as they intersect with infrastructure and urban planning. Power and energy are important factors. EMAAP-Q must conserve water through structural changes, education, and tariff increases. New sources of water should also be explored, but further research is critical to ensure that additional sources are sustainable.

The impacts of climate change are wide-ranging and complex. For Quiteños, a significant decrease in the city's main water source would be devastating. Limited water supply decreases the availability of drinking water and sanitation services. Residents of Quito could experience negative health impacts, such as increased diarrhea and other waterborne illnesses. Peri-urban areas not only receive less water, but their water is of a lower quality than that of the city center, putting these generally poorer people at the highest risk for disease. Any restraint on the amount of water available will be felt strongly by citizens living in the outskirts of Quito.

Ecuador trades virtual water, which is water used when producing a good or service. In the Ecuadorian example, this occurs through the agricultural exports of bananas, roses, cacao, and coffee. Taken together, these exports represent a significant virtual water loss for Ecuador. While the municipality of Quito itself does not produce these crops, Quito's rivers and streams fuel many agricultural areas, contributing to the amount of overall virtual water that is exiting the country. Consequently, Ecuador's trade in virtual water—should it experience any greater demand than it does currently—could potentially affect the amount of water available in Quito's rivers and streams.

Agriculture, which totals approximately 10% of the region's GDP, ²³ will experience perhaps the most devastating consequences of Quito's water loss. The reduction and possible loss of water will primarily affect farmers and the inhabitants, whose sole food source is local farming. The effects of climate change will even alter the types of food that will be available to Quiteños, as cattle and dairy production, which require vast amounts of water, will decline with increasing temperatures.²⁴

The decrease in glacial runoff and snowmelt in Quito will also affect the political and institutional relationships established around the water system. One aspect of EMAAP-Q's continued growth is based on its partnership with the IDB. This partnership has allowed EMAAP-Q to master water resource management by funding infrastructure and capture mechanisms to increase Quito's access to clean water. EMAAP-Q must also address the impact of climate change on the role of the municipality of Quito, as it will be responsible for planning the city's future water plans. The challenge is to facilitate EMAAP-Q's

THE EFFECTS OF CLIMATE CHANGE WILL EVEN ALTER THE TYPES OF FOOD THAT WILL BE AVAILABLE TO QUITEÑOS, AS CATTLE AND DAIRY PRODUCTION, WHICH REQUIRE VAST AMOUNTS OF WATER, WILL DECLINE WITH INCREASING TEMPERATURES.

transition to a holistic approach to water management that is beyond the current infrastructure of pipes and pumps. EMAAP-Q must develop a nuanced approach to water capture in the face of many of the climactic changes.

POTENTIAL SOLUTIONS

The first step is to consider whether to mitigate or adapt to the above-mentioned changes, i.e., to lessen the burden of climate change or to find new ways of providing water.²⁵ Research indicates that an optimal approach includes a balanced blend of adaptation and mitigation. To lessen the effects of climate change, Quito must apply technology and systems capable of handling its worst-case scenarios.

As water availability diminishes, conserving the remaining water supply will play an important role in developing new and sustainable water policies and decrease the burden of climate change. Reducing consumption through higher tariffs, education, and recycling would help to mitigate the impacts of climate change. By conserving available water resources, social discontent and political challenges as a result of water scarcity—may be avoided. Quito has already implemented educational programs in local schools through the "Life for Quito" program, which encourages water conservation at home. These programs should be scaled-up and adapted to include all area residents. Conservation may also be achieved through increased tariffs that would force a reduction in use. It is critical that subsidies for the poor are sustained to prevent an undue financial burden.

EMAAP-Q plans to build a water treatment plant to process grey water and other wastewater that is generated by the city. The plant should utilize rainwater as it is an unused resource in Quito's water sourcing system. This will require a significant

adaptation of the current infrastructure, but would take advantage of rainwater runoff, which is currently captured and dumped into rivers. Adapting the treatment plant will create a cycle of reuse that is far more sustainable.

EMAAP-Q is also exploring new underground water sources in the form of aquifers to mitigate the effects of climate change. With glacial lakes and streams rapidly depleting and with an unknown availability of rainwater, there is a real probability that the city should turn to its aquifers as a main water source. A challenge with this approach is the massive investment that is required for new infrastructure. This cost is compounded by the topography of Quito—its altitude is highly variable and would require EMAAP-Q to pump water to high elevations. Currently, gravity works in EMAAP-Q's favor and reduces energy expenditure.

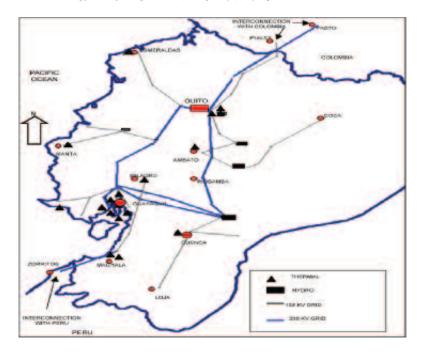
As changes in climate affect water availability, the systems that now revitalize aquifers may also change. It is impossible to know how long Quito's aquifers

will remain viable. A transition from glacial melt to groundwater is not necessarily a simple switch from one source of water to another, because "climate change impacts ground water systems through changes in aquifer recharge," while the effects of Quito's water usage will not be apparent until after the water is already in use. ²⁶ Thus, the search for aquifers must be supplemented by extensive research regarding how a drastic shift in water sourcing from glacial melt to groundwater will affect Quito. This adds yet another cost to the equation.

Because of the interrelation between energy and water, an increase in energy production is the final factor that EMAAP-Q must consider. If EMAAP-Q is forced to pump water against gravity, additional investments in energy, specifically in hydropower, will be necessary. Currently, 45.5% of Quito's energy comes from hydropower, a source that is both entirely dependent on water availability and highly sensitive to variations in climate. Research indicates that climate is intricately related to hydropower, as the regions where most of the hydropower plants are

The current sources of electricity in Ecuador

Source: M.R. Peláez-Samaniegoa, M. Garcia-Perezc, L.A.B. Cortezb, J. Oscullod and G. Olmedoe. "Energy sector in Ecuador: Current Status" Energy Policy. August 2007. Pages 4177-4189.



located are dry from October to March, causing serious shortfall problems.²⁷ A drier Quito's reliance on hydropower will suffer when there is limited water available year-round. As a result, Quito must diversify its sources of electricity generation.

CONCLUSION

Climate change in the Andean region will negatively impact the supply of water to Quito, Ecuador: with glaciers melting at a rapid rate, it is certain that the there will be diminishing sources of water for Quito. Farmers and residents of the region will be left with few water resources; thus, EMAAP-Q must consider climate change in its planning process. Although

evidence indicates that glacial melt is an effective source of water for Quito in the near-term, as temperatures rise, investments in infrastructure should be made carefully, as climate models indicate that new sources of water will have to be explored to meet the demand of the urban population. The region must consider all elements that will affect Quito's water supply and must adapt to and mitigate the effects of climate change through conservation of existing resources and exploration of new sources.

NOTES

- 1. www.weather.com.
- 2. www.goecuador.com.
- 3. G. Margin, G., et al., "2007: Latin America. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change" edited by M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson. Cambridge: Cambridge University Press, 581-615, p. 583.
- 4. Pauline Bartolone, "When the water runs out" (2006). See: http://www.salon.com/news/feature/2006/04/07/ecuador2/print.html
- Juan Niera, General Manager, EMAAP-Q, interviewed by Nupur Chaudhury, Jennifer Farmwald, and Leanne Webster, August 6, 2008.
- 6. Pilar Conejo, "Ecuador Case Study: Climate Change Impact on Fisheries," Human Development Report 2007/2008, 1-38. See also, G. Margin et al., "2007: Latin America. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change." p. 584.
- 7. Ibid, 583.
- 8. Ibid.
- Walter Vergara, "The Impacts of Climate Change in Latin America," World Bank (2007), 4.
- Mathias Vuille, et al., "20th Century Climate Change in the Tropical Andes: Observations and Model Results," *Climate Change* 59 (2003): 75-99, p. 96.

- 11. Mark Williams, et al., "Interpreting Ice Signals from a Shallow Ecuatorian Ice Core: Antisana, Ecuador," (July 31, 2004), 3; See also, Vuille, op. cit., p. 75.
- 12. Vergara, "The Impacts of Climate Change in Latin America," 3.
- 13. Ibid, 4.
- 14. G. Margin, et al., op. cit. 583.
- 15. Ibid, 598.
- 16. Vuille, et al., op. cit., 76.
- 17. Williams, et. al., op. cit., 3.
- 18. Vuille, et al., op. cit., 96.
- 19. Margin, et al., op. cit., 583.
- 20. Ibid.
- 21. Williams, et. al., op. cit., 2.
- 22. Niera, interview by Chaudhury, Farmwald, Webster.
- 23. Margin, et al., op. cit., 584.
- 24. Ibid, 583.
- 25. Stewart Cohen, et al. "Learning from Local Help: Expanding the Dialogue on Climate Change and Water Management in the Okanagan Region, British Columbia, Canada," in *Climatic Change*, 75: 348; see also, G. Margin, et al., op. cit., 584.
- 26. H.A. Loaiciga, "Climate change and ground water," in *Annals of the Association of American Geographers*, 93 (2003): 30-41, p. 34.
- 27. M.R. Peláez-Samaniegoa, et al., "Energy sector in Ecuador: Current Status," in *Energy Policy* (August 2007), 4177-4189.

NONPROFIT EXECUTIVE COMPENSATION: TOO MUCH OR NOT ENOUGH?

ERICA DIXON

ABSTRACT

any Americans share a sense of outrage over escalating executive salaries, as demonstrated by President Obama's determination to include salary caps in the economic stimulus bill that he signed into law on February 17, 2009.

Nonprofit executives, whose salaries have been rapidly increasing in recent years, are

often lumped together with other organizational leaders as part of an unhealthy pattern of excessive executive compensation. This article examines whether increases in compensation at nonprofits are indeed part of the same pattern seen in for-profit institutions. Are the rising salaries of nonprofit leaders really a further demonstration of seemingly widespread executive greed, or could there be other underlying factors at work?

INTRODUCTION

Rising executive salaries and other benefits are frequently viewed with suspicion. Do they signal a lack of effective governance, a leader beyond the board's control? A clear definition of what is reasonable may be hard to identify, particularly in the nonprofit sector, where it is often assumed that leaders are as committed to the cause as they are to the paycheck. But two rising trends—the approaching retirement of many current nonprofit executives and the growing disillusionment of their potential replacements—suggest the need to redefine expectations about the best ways to attract and retain effective nonprofit leaders. In the face of a potentially significant leadership gap, nonprofits may need to adapt to the changing expectations of their current workers, while also exploring new ways to cultivate and attract executive talent, even from outside the nonprofit field. From this perspective, escalating executive salaries may be only a first step in the continuing evolution of the nonprofit sector.

RISING EXECUTIVE PAY: NOT JUST A FOR-PROFIT ISSUE

In recent years, significant attention has been placed on the escalating salaries of corporate CEOs. According to a report by the Economic Policy Institute, in 2005 CEOs' take-home pay was 262 times that of their workers. There are some indications that this trend is catching on in the nonprofit world as well. In 2005, salaries for the leaders of America's largest nonprofits increased 4.8 percent, outpacing both inflation and the increases received by executives at the 500 largest for-profit corporations. Of course, with only four of the five highest paid nonprofit executives earning salaries in the millions, nonprofit executives are still earning far less than their for-profit counterparts.²

Rising nonprofit executive salaries have been accompanied by both increased government scrutiny and internal measures to strengthen governance and accountability, similar to those required in the forprofit world by the Sarbanes-Oxley Act (Sarbox). In 2004, the Internal Revenue Service (IRS) began reviewing records from 1,200 nonprofits that "paid excessive benefits or compensation" and the Senate Finance Committee turned its attention to nonprofit pay.³ The IRS also redesigned the 990 tax form filed by most nonprofits, in an effort to increase transparency, including more clearly revealing

executive salaries. A growing number of organizations are also now requiring board oversight of the 990 preparation.⁴

In addition, Sarbox-inspired conflict of interest and whistle-blower policies are now in place at 90 percent and 68 percent of organizations, respectively. Further, many nonprofits have made efforts to bring their financial reporting practices in line with emerging trends: in 2006, 59 percent of nonprofit organizations reported having improved their accounting practices; by 2007 the number had risen to 92 percent.⁵ Certainly the growth of efforts to document, track, and limit nonprofit executive compensation suggests at least the perception of a problem.

NONPROFIT EXECUTIVE COMPENSATION: TOO MUCH OR NOT ENOUGH?

Rather than assuming that nonprofits are subject to the same forces driving increases to executive compensation at for profit organizations, it is instructive to examine other possible explanations. As the authors of *Ready to Lead?* note, "the genius of this sector—what continues to attract so many to nonprofit careers despite the potential disadvantages—is its promise of meaningful work leading to social change."6 But is this promise really enough to attract the leaders that nonprofits need? The perception that nonprofit leaders are receiving more money than ever before may be accurate, but incomplete. Historically, nonprofits may have failed to invest enough in management and consequently suffer from a lack of organizational efficiency and an inability to adequately measure effectiveness, among other problems. As James Orlikoff, president of a Chicago-based consulting firm that specializes in nonprofit governance says, "If you only pay for mediocre talent, you will only have a mediocre organization."7 Confronting an increasingly competitive environment where funders and other stakeholders are demanding more efficiency in attaining measurable outcomes, today's organizations may require leaders with more training and experience who need higher salaries.

In addition to the increasing professionalism of the field, other trends suggest that recent executive pay increases may be only the first signs of a looming leadership crisis. As the current generation of nonprofit executives begins to enter retirement over

THE GENIUS OF THIS SECTOR—WHAT CONTINUES TO ATTRACT SO MANY TO NONPROFIT CAREERS DESPITE THE POTENTIAL DISADVANTAGES—IS ITS PROMISE OF MEANINGFUL WORK LEADING TO SOCIAL CHANGE.

the next decade, many organizations will need new leaders.8 In 2006, CompassPoint Nonprofit Services, in partnership with the Meyer Foundation, surveyed nearly 2,000 nonprofit executives in eight American cities. The results, which are reported in Daring to Lead 2006, reveal that three out of four leaders plan to step down within the next five years (this number includes some executives planning to retire, as well as many who intend to transition to other jobs). Despite this coming exodus, few have made succession plans: just 29 percent of those surveyed have developed a succession plan with their boards. Even among those planning to leave within one year, fewer than half (47) percent) reported making plans for the change in leadership.9 Further, only half of current executive directors said they are grooming someone to be their successor. 10 Even more troublingly, in *Ready to Lead?*, the September 2007 follow-up to *Daring to Lead* 2006, only 4 percent of the next generation leaders say they are being prepared for a top position. 11 Ready to Lead? also found that many nonprofit staffers have trouble determining a clear path to the top and feel stymied by the lack of mentoring and support. This compares unfavorably with the for-profit sector where training for advancement is common.¹²

Beyond a lack of understanding about how to acquire the skills and experience they need to lead nonprofits, many current employees view the executive director job description as unappealing: "a third of survey respondents indicated that, for them, the executive director position is not the ideal way to have an impact on their community or field of interest. Another quarter reported that their skills and interest are better suited for program work." The perception that the top job is not a desirable one seems to be spreading throughout organizations, from the top down. Low salaries, long hours, and an excessive focus on fundraising were cited by lower level staff members as some of the most unappealing aspects of

the top job, echoing complaints made by the current executives surveyed in Daring to Lead. Dissatisfaction with nonprofit salaries was especially high: 69 percent of employees reported being underpaid and 64 percent have concerns about money if they commit to long-term nonprofit careers. Common worries include the ability to pay off large amounts of student debt and effectively save for retirement.¹⁴ Finally, today's nonprofit workers appear to be more open to mixing a desire to work toward social change with employment in the for-profit sector, creating a new challenge in the struggle to keep talented leaders at nonprofits. As authors of Ready to Lead? state, this kind of "sector agnosticism" suggests that nonprofits will need to do more than ever before to attract and retain the most talented workers.¹⁵

CONCLUSION

It seems clear from these findings that at least some of the recent trend of marked increases in pay for nonprofit executives can be attributed to the need to remain competitive in attracting and retaining talent, particularly in the face of a looming leadership gap. As David P. Magnani, a former Massachusetts state senator and first executive director of the Massachusetts Nonprofit Network, has said, "The nonprofit sector is often thought of as being the weak sister, organizationally and professionally, to the forprofit sector ... We want people to see this sector as

THE NONPROFIT SECTOR IS OFTEN THOUGHT OF AS BEING THE WEAK SISTER, ORGANIZATIONALLY AND PROFESSIONALLY, TO THE FOR-PROFIT SECTOR ... WE WANT PEOPLE TO SEE THIS SECTOR AS DOING GOOD, BUT ALSO DOING IT WELL.

doing good, but also doing it well." The need to invest more deeply in training and maintaining both today's leaders and those of tomorrow can no longer be denied. By increasing executive salaries, nonprofits are not irresponsibly squandering their resources, but are wisely investing in the leadership they need to help fulfill their missions.

NOTES

- 1. Lawrence Mishel et al., "Executive Summary," *The State of Working America 2006/2007* (2006): 7.
- Noelle Barton et al., "Top nonprofit executives see healthy pay raises," Chronicle of Philanthropy, Sept. 28, 2006.
- 3. Sarah Johnson, "Sarbox's influence seeps into nonprofits," $\it CFO$, Dec. 4, 2007.
- Ibid. See also, Sara Johnson, "Highlights of redesigned Form 990," *Internal Revenue Service*, June 13, 2007.
- Sarah Johnson, "Sarbox's influence seeps into nonprofits," CFO, Dec. 4, 2007.
- 6. Marla Cornelius et al., Ready to Lead? (Compasspoint, 2008), 5.
- 7. Sherri Begin, "More bucks for the boss," *Crain's Detroit Business*, March 27, 2006, 11.
- 8. Jennifer C. Berkshire, "Potential charity leaders see top job as unappealing," *Chronicle of Philanthropy*, March 6, 2008.
- 9. Jeanne Bell et al., Daring to Lead 2006 (Compasspoint, 2006), 5-7.
- 10. Marla Cornelius et al., op. cit., 25.
- 11. Ibid., 16.
- 12. Ibid., 22-24.
- 13. Ibid., 24.
- 14. Ibid., 16-20.
- 15. Ibid., 5.
- 16. Sacha Pfeiffer. "Ex-legislator to lead new network formed to represent nonprofits," *Boston Globe* August 6, 2007, E1.

RUNNING FOR OFFICE: A GRADUATE STUDENT'S PERSPECTIVE

AN INTERVIEW WITH VICTORIA LEBRON

n September 2008, Queens County, New York, held races for three open County Committee seats. One of these open seats was in the 36th Assembly and 54th election district—a small, four-block radius in Astoria. Victoria Lebron, a native of Queens and a part-time master of public administration student at the Robert F. Wagner Graduate School of Public Service at New York University, decided to run for local office and won. The Wagner Review spoke with Victoria about the process and sought her advice for Wagner students looking to branch out into elected office.

Wagner Review: Victoria, please tell us about the district and office you hold.

Victoria: The Queens County Committee comprises several thousand male and female members who each represent a portion of every assembly and election district. Many of these districts, like mine, are roughly several blocks in length and represent only a few dozen people. A county committee seat offers an opportunity for true, grassroots community politics. In fact, Manhattan Borough President Scott Stringer got his start as a County Committee District Leader in Manhattan.¹

FOR THE COMMUNITY LEADERS WHO ARE INVOLVED IN CURRENT RECRUITMENT EFFORTS, THE GOAL IS SIMPLE—ENSURE THAT COMMUNITY RESIDENTS HAVE THEIR VOICES HEARD.

County Committee members have few formal responsibilities: vote to elect the party's Chairperson and Executive Committee, including district leaders; select candidates to fill vacancies in the State Senate and Assembly, and serve as a voice urging local get-out-the-vote efforts. For the community leaders who are involved in current recruitment efforts, the goal is simple—ensure that community residents have their voices heard.² Sound exciting? It is! Yet, these seats remain largely unfilled. Why? Almost no one knows about this local political opportunity.

WR: What prompted you to run for office? Was it something you always wanted to pursue?

Victoria: A local political group in Brooklyn called the New Kings Democrats (NKD) motivated me to run for office. The mission of the NKD is "to recruit and prepare individuals to run for Kings County Democratic Committee." The mission was right up my alley—except that I live in Queens. I called Matt Cowherd, co-founder of NKD, to find out more information. Specifically, I wanted to know if I could become a member of NKD and how I could run for County Committee seat. Matt told me that I could join NKD and introduced me to a very helpful

nonpartisan group located in lower Manhattan called Grassroots Initiative.³ I learned that Jeff Merritt, President, and Alex Carabelli, Deputy Director, could help me run for a County Committee seat in my borough. They would provide low-cost campaign materials in case my race was contested. I asked if anyone had started a Queens' branch of the NKD and found out that it did not exist. That was my cue to spearhead the New Queens Democrats (NQD).

When I called Jeff and Alex at Grassroots, I learned that they first had to find a district in my neighborhood with an open female county committee seat. A day later, Grassroots found a district in my neighborhood with a vacant female seat: district 54/36 (aka election district 54 and assembly district 36) and they sent me the petition materials. I was so excited! It was a tiny district: only four blocks wide, covering a square perimeter around 34th and 35th Avenues and along 37th and 38th Streets.

WR: Were you intimidated by petitioning and campaigning? What advice do you have for people just starting the campaign process?

Victoria: Petitioning is an art. A candidate can make several mistakes to lose the interest of the potential signatory. Waffling causes a person's eyes to glaze over; being too nice can sometimes seem insincere. Ultimately, the best tactic is to be yourself: tell people who you are and why you are running for office.

Overall, it took me two weekends to gather seven signatures. This may seem outrageous, but the fact is it takes time to ensure that the signatures are valid. Obtaining signatures is easy; obtaining valid signatures is a challenge. Part of the difficulty in collecting valid signatures is that voter registration lists are not always up to date. This is not necessarily the New York City Board of Elections' (BoE) fault. New York State law requires voters to notify the BoE within 25 days of an address change to preserve their voting rights, but this does not always happen.

When I finally collected all seven signatures, I brought them to Jeff and Alex at Grassroots to determine if they were valid. If so, Jeff would submit them to the New York City BoE by the July 10 deadline and my name would officially be listed on the ballot. Now, depending on whether my race was

contested, I would either be elected by default or have to run a campaign to win the September 9 election. Feeling smug and anticipating little interest in a race of this narrow scope, I figured there was no way I would be contested. Jeff reminded me that anything could happen.

WR: That sounds like a streamlined process. Were there challenges along the way?

Victoria: Jeff was right. A few days later I discovered that my race had been contested. My immediate thought was that it was some joke. Fortunately, my friend Ian, co-founder of NQD, pointed out that I was lucky to experience the campaign process. He had already been elected by default because no one had contested his race and envied my opportunity to meet my constituents face to face before the election.

That still did not make me feel better. Who was this woman who was running against me for female county committee member in the 54/36? I only knew her name: Gertrud Bolkart. The people at Grassroots helped me relax by encouraging me to get campaign materials and offered help with the process. With Grassroots' help, I was able to design a great flyer so that I could canvass in my district.

DEFAULT BECAUSE NO ONE HAD CONTESTED HIS RACE AND ENVIED MY OPPORTUNITY TO MEET MY CONSTITUENTS FACE TO FACE BEFORE THE ELECTION.

Prior to campaigning, I received formal written notice from the BoE that my race was contested. They even provided me with Gertrud's full name and address. I began to think, as I started organizing canvass dates with friends, that it might be a good idea to visit her.

Two days before the election, on September 7, I met with a group of friends to campaign and canvass in my district. The palm flyers that Grassroots helped me design were great conversation starters and a reminder to the prospective voter of the upcoming

election. Some of the people we encountered were very interested to hear my platform and even had requests for changes they would like to see (mostly landlord related) if I won the seat. Some people were completely uninterested.

At the end of the day we felt we had encouraged a small group of people to vote on Tuesday, September 9. Even if I did not win, I had done my best. All I needed was a few people to vote for me in such a small race, and now all that was left was to meet my opponent. Gertrud lives only four blocks from my house. I was nervous when I visited her and worried about how she might react. As she opened the door, I introduced myself and explained why I was there. After some initial confusion—Gertrud was unaware that her name was on the ballot—we agreed to call the BoE to ask them to remove her name and she wished me luck with the election. I went home, feeling slightly relieved and glad to have met a friendly neighbor.

The next day, I called the Queens County BoE to clear things up before Election Day. After a series of frustrating transfers, I was able to speak with someone who told me that it was too late to remove Gertrud's name from the ballot, despite the fact that she did not want to run. Her name remained on the ballot so people could and might vote for her. If Gertrud won and wanted to concede, she could call the BoE. I felt frustrated, but there was nothing I could do but wait.

WR: After all of that, you must have been pretty excited on Election Day to have your name on the ballot.

Victoria: On Election Day, I woke up with butterflies in my stomach. I could not vote for myself in my district, since I was registered in a different district, but I could vote for other seats in the local primaries. However, as I rounded the corner of my polling place, I noticed that something seemed awry. It looked too quiet and I saw no signs about voting. Fueled by anxiety, I nervously asked the man if I could vote at the site. He responded that I could, but not that day. Confused, I walked into the building and was greeted by the principal, who told me the same thing. She elaborated that no one from the district was running in this local election, so the next time I could vote would be for the Presidential election.

This left me feeling confused and nervous that something wasn't right. As I walked to the train station, I texted a few friends to tell them what had happened: "The polls were closed in my district. Sounds fishy to me."

Later on, Ian called to say that what had happened, while frustrating, was probably legitimate. He had also called some of my constituents to remind them to vote and said one person had agreed to vote for me. Yes! I could win if even just one person voted for me and no one voted for Gertrud.

Throughout the day, the results rolled in for NKD and NQD members. Some reported winning and others were disappointed to have lost. I checked the BoE Website in the evening, but nothing had been updated for my district.

The next morning I called the Queens County BoE. They said I had to wait a few weeks to hear the results. I emailed Jeff and Alex at Grassroots, Ian of NQD, and Matt of NKD, explaining what had happened and how I had to wait while most other districts had already been called. I just wanted answers. What I got was very unexpected.

I received a call from an online newspaper called *Gotham Gazette*. Mike, the reporter, asked me to confirm my identity and that I was running for office. Then, he asked whether he could use my story about running against a candidate who did not know she was on the ballot in *The Wonkster*, a blog he contributed to at the paper. I agreed.

Mike promised that he would send me notice when the article posted on the Website. When I read it, 4 I was happy to learn that Mike had been able to contact the Queens County Committee office and get answers about how Gertrud's name had made it on the ballot: "Insiders say that this happens regularly. 'People work from old lists and pull names,' says Henry Berger, an elections lawyer. 'It's most frequently the political parties, since they control the petitioning process.' But Mike Rice, the executive secretary for the Democratic Organization of Queens, contends that 'it's notanissue.' 'It's happened in the past occasionally,' he says. 'Sometimes somebody will put a friend's name on the ballot without asking.' Once elected, the committee member can resign and the party will appoint somebody to take their place."

WR: You must have been relieved...

Victoria: I felt satisfied after reading the article and better about waiting for the results. Ultimately, though, the voters would choose whom they preferred. Plus, I had other things to worry about now: the upcoming Queens County Committee meeting. The results of the election would be announced at this meeting and NQD might even be able to fill other empty county committee seats by nominating people we knew from the open districts. We wanted to make our mark in this meeting. NKD had been nearly attacked at their first County Committee meeting. It was adjourned almost as soon as they announced themselves in the room.

Fortunately, the meeting was a success. NQD was able to nominate a new female county committee member in eastern Queens. After the meeting, I made my way up to the podium to ask Mike Rice (quoted in *The Wonkster* article) about my election status. Mike took one look at me and said, "So *you're* Victoria Lebron." I felt slightly infamous and gave him a big smile. After scanning through a hefty book of election districts, Mike confirmed that I had won the election—by two votes!

WR: That must have been quite a moment to realize that you had won public office.

Victoria: It was a great feeling to know that my hard work paid off and I was elected. It was worth it, and I would support anyone else who wanted the experience. Running for office is not easy, but it is rewarding if you have a good support system. I was lucky to have friends and connections throughout the process. Now, my plan is to work with some of my new contacts in Queens' politics and organize an event in my district that will attract people of all ages. I want my constituents to feel comfortable enough to speak out about important issues and, of course, join New Queens Democrats. But that is another story. The moral of this one? Anyone can run for office.

NOTES

- $1. \ http://www.villagevoice.com/2001-08-28/news/mother-dearest-the-courthouse-cabal\&page=1.$
- 2. http://www.gograssroots.org/press/release6-24-08.php.
- 3. www.gograssroots.org.
- http://www.gothamgazette.com/blogs/wonkster/2008/09/16/running-foroffice-without-even-knowing-it/.

MEETING THE HEALTHCARE NEEDS OF YOUNG, CHRONICALLY ILL, AND SEVERELY DISABLED PATIENTS IN NURSING HOMES

JORDAN WEITZ

ABSTRACT

he current climate for increased funding and development of community healthcare solutions has neglected non-elderly Americans who require institution-level healthcare coverage. Approximately 200,000 Americans under the age of 65 reside in nursing homes designed primarily for the elderly. The social and healthcare needs of younger, chronically disabled patients who suffer from diseases such as Parkinson's disease, multiple sclerosis, and cerebral palsy present several healthcare policy challenges not met within the current healthcare delivery system. A significant majority of this younger population is cognitively functional and this community has a legal right to live in non-marginalizing and ageappropriate healthcare settings. While there is no silver bullet approach, three policy alternatives in this paper outline the rights of the chronically ill non-elderly. The suggested policies weigh the strengths and weaknesses of each idea. Suggestions include increasing services offered through state home and community-based care waiver programs, imposing federal mandates for improved institutional healthcare, including salaries and training; and calling for the development specialized care centers and/or nursing home wings for this population. These unmet needs, though small in scope, should be addressed based on social, moral, and legal entitlements to condition and age-appropriate medical treatment.

"There are an awful lot of young faces behind the walls of those nursing homes, and there will be more. And there are a lot of aging mothers and fathers out there, fearful and wondering: "What's going to happen to my 38-year-old child when I die?"

> —Robert Enteen, then director of health research and policy programs for the National Multiple Sclerosis Society.¹

THE NON-ELDERLY IN NURSING HOMES

Approximately 200,000 Americans under the age of 65 reside in nursing homes designed primarily for the elderly. The social and healthcare needs of younger, chronically disabled patients present several healthcare policy challenges not met within the current healthcare delivery system. A significant majority of this younger population is cognitively functional and has a legal right to live in non-marginalizing and age-appropriate healthcare settings. Roughly onefifth of this population has chronic diseases such as Parkinson's disease, multiple sclerosis, and cerebral palsy that require case-specific treatment and roundthe-clock supervision.2 This unmet need, though small in scope, should be addressed based on social, moral, and legal entitlements to condition and ageappropriate medical treatment.

ROUND-THE-CLOCK SUPERVISION.

POLICY PROBLEM BACKGROUND

The fight for non-marginalizing, appropriate care for the non-elderly mustered significant strength in 1995 when Georgia state officials denied the right of two disabled women, then living in a nursing home, to live in their homes and receive care in communitybased settings. In 1999, the Supreme Court's Olmstead decision overturned Georgia's decision and paved the way for improved state compliance with the Americans with Disabilities Act (ADA) of 1990, which prohibits unnecessary institutionalization in nursing homes.³

The Olmstead decision requires that states provide community based-services for persons with disabilities who would otherwise be entitled to institutional services when the state's treatment of professionals determine that such placement is appropriate and when the affected persons do not oppose such treatment and placement can be reasonably accommodated.⁴ In accordance with the ADA, the Olmstead decision affirms that people with disabilities cannot be forced to choose between the receiving of medical services and the relinquishment of basic civil and social rights.

THE FEDERAL RESPONSE TO OLMSTEAD

The US House of Representatives' Health, Education, Labor, and Pension Committee (HELP) has taken a much needed leadership role in the diversification of community-based care treatment options for those well enough to receive care in such environments. Along with the Department of Health and Human Services (HHS), the Committee has ensured statelevel compliance with the Olmstead decision.

Enforcement of Olmstead has sparked the emergence of community-based health solutions, while ignoring the healthcare needs of chronically ill, non-elderly patients. Under HELP's leadership, The Centers for Medicare & Medicaid Services (CMS) has created a repository of Promising Practices in Home and Community-Based Services (HCBS) to highlight state efforts that enable disabled persons of any age to live in the most appropriate integrated community setting. These efforts have created layers of accountability at a state level. Olmstead task forces composed of state and local government officials, healthcare providers, and disabled patients have addressed the issue of unnecessary institutionalization in nursing homes. Furthermore, since 2001, CMS has allocated approximately \$270 million in Real Choice Systems Change (RCSC) Grants for Community Living to all fifty states, the District of Columbia, and two US territories. The RCSC grants are designed to offer "effective and enduring

improvements in the community long-term support system."5

In response to this Congressional action, CMS and the HHS Office of Civil Rights created Olmstead guidance programs for state Medicaid directors. These programs require states to develop effective working plans for moving institutionalized patients to community health settings. These plans, however, target patients typically well enough to receive visiting nurse or outpatient treatment.

Olmstead compliance has elicited hundreds of legal disputes involving cases of unnecessary institutionalization. Congress, through HELP's leadership, can reduce the volume of Olmstead-related litigation and jumpstart reform for this marginalized patient population by instructing the Department of Health and Human Services (HHS) to establish best practices and roll out defensible responses to all key Olmstead provisions. Doing so will alleviate the intense strain on the federal court system while hastening reform that addresses the needs of these marginalized patients.

HELP can ensure full Olmstead compliance for nonelderly Americans entitled to full-time care in settings more specialized and age-appropriate than traditional nursing homes. The emergence of community-based

THE EMERGENCE OF COMMUNITY-BASED HEALTHCARE SOLUTIONS INCLUDING VISITING NURSE SERVICES, AND PHYSICAL/OCCUPATIONAL HEALTH THERAPY CENTERS REPRESENTS A FUNDAMENTAL SHIFT IN THE DELIVERY OF CARE.

healthcare solutions including visiting nurse services, and physical/occupational health therapy centers represents a fundamental shift in the delivery of care. It is a shift that should be maximized in the decades to come to create care-diversification in a system lacking variety. However, Real Choice Systems Change (RCSC) Grants do not explicitly address the unmet needs of the rights of non-elderly nursing home patients whose level of disability or disease precludes them from community-based treatment

options. RCSC grants focus entirely on community care development for patients well enough to receive care in the community. The needs of the non-elderly nursing home population have been left out of the reform discussion because of its small size and the complexity of this population's medical needs. To ensure the social and legal rights of this patient community in accordance with Olmstead, HELP can support additional funding for HHS's Office of Civil Rights to study the needs of the severely disabled, non-elderly nursing home population.

EVALUATING REFORM OPTIONS AND HEALTHCARE NEEDS

The duration of a patient's nursing home stay depends on age at the time of admission and disability type. The mean age of non-elderly individuals in nursing homes is 50 years at the time of admission and the average stay is less than two years. Many patients within this community are admitted to the nursing home for a period of transition following traumatic injury. Patients with illnesses. such as cerebral palsy and multiple sclerosis, typically enter nursing homes at a younger age and for a longer duration. For this population, the mean age of admission is 48 and the average stay is 11 years.9 Due to extreme immobility, younger patients with diseases, such as primary progressive multiple sclerosis or advanced cerebral palsy, are more likely to develop bed sores, skins rashes, or urinary tract infections than elderly patients. 10 Still, the relative youth of this patient population and their level of cognitive functioning entitles them to care environments more socializing than nursing homes designed primarily for the elderly.

Discussion of nursing home reforms for this patient population has been minimal at best. The Multiple Sclerosis Society reports that nurses are often not trained to handle these acute problems. The Government Accountability Office (GAO) reports a chronic workforce shortage due to increasingly difficult working conditions and low wages, frequently without benefits. The turnover rate for nursing home staff ranges between 40% and 100% annually. The current climate for increased funding and development of community healthcare solutions has neglected non-elderly Americans who require institution-level healthcare coverage. While there is no silver bullet approach, three policy alternatives meant to address the rights of this population are outlined

below. To better understand the needs of this population amidst federal financial constraints, the strengths and weaknesses of each option are noted.

POLICY OPTION 1: INCREASING SERVICES OFFERED THROUGH STATE HOME AND COMMUNITY-BASED CARE WAIVER PROGRAMS

States are entitled to apply for federally permitted and community-based care waivers for their respective Medicaid programs. As stated on CMS' Website, current state funding capacities allow for an array of care services including care management, home health aide and personal care services, medical day care, as well as rehabilitation and respite care. State legislatures must adjust their respective annual Medicaid appropriations to account for the costs of any waiver program. State-based Olmstead task forces have supported Medicaid waivers that allow states to reprioritize care options for the non-elderly disabled and transfer them out of nursing homes whenever possible.¹³ In community health settings, increasing care services to address this population will require significant retooling. Existing community healthcare facilities, such as outpatient and physical therapy centers, are not equipped to handle an influx of chronically disabled patients.

66 IN COMMUNITY HEALTH SETTINGS, INCREASING CARE SERVICES TO ADDRESS THIS POPULATION WILL REQUIRE SIGNIFICANT RETOOLING.

Though the Olmstead decision encourages the development of community healthcare solutions, the landscape of existing community healthcare models does not support round-the-clock nursing coverage. This policy may divert attention from this population's most pressing right to full-time nursing care in non-marginalizing settings. State Olmstead task forces, ensuring the rights of patients institutionalized without proper cause, should consider such nuanced limitations within the community health system.

POLICY OPTION 2: IMPOSING FEDERAL MANDATES FOR IMPROVED INSTITUTIONAL HEALTHCARE, INCLUDING SALARIES AND TRAINING.

Nurse staffing shortfalls constitute one of the largest barriers to adequate care for nursing home residents generally. Research finds that quality of care is severely impaired once staffing falls below certain levels. Nearly half of the nursing homes surveyed by CMS were below the preferred minimum staffing level for total licensed staff, and almost two-thirds were below the preferred minimum level for registered nurses.¹⁴ Improving caregiver compensation and training may affect improved long-term care health outcomes. HELP and HHS's support of enhanced caregiver training would improve accountability structures and allow for better quality control. Though state Olmstead task forces may report improved nursing home performance once caregiver supports are affirmed, some key questions remain about how the problem of patient marginalization is addressed through such a policy. Lastly, though it may be a battle worth fighting, mandating training protocols and calling for nationwide payment increases could foster significant opposition from HMOs, hospitals, and doctors.

POLICY OPTION 3: CALLING FOR THE DEVELOPMENT SPECIALIZED CARE CENTERS AND/OR NURSING HOME WINGS FOR THE CHRONICALLY ILL, NON-ELDERLY.

There are currently only a handful of care facilities in the United States for the non-elderly with chronic disease. One model, The Boston Home in Boston, Massachusetts, is one of the few institutions maintaining a patient population with a mean age of 50 years and employing nurses trained in autoimmune disease care. Patients live in a healthy, socially vibrant, non-marginalizing atmosphere. The Boston Home covers fixed costs through the support of private donors, and receives Medicaid reimbursement for the direct provision of patient care. Unfortunately, there is little incentive to build other such facilities nationally, as Medicaid reimbursement rates tend to favor patients living in traditional nursing homes. ¹⁵

TO MAINTAIN THE OPERATING COSTS OF NEW FACILITIES OR SPECIALIZED CARE WINGS, ALL SUCH INSTITUTIONS MUST RECEIVE THE STATE AND FEDERAL LEVEL REIMBURSEMENT NECESSARY FOR STAFF TRAINING AND CAPITAL EXPANSION PURPOSES.

To guarantee the civil rights and healthcare needs of this population, HELP may support universal Medicaid reimbursement rules for the rights of the non-elderly and disabled to live in non-marginalizing, full-time care environments. As the vast majority of this population is eligible for Medicaid, all states cover their right to live in standard institutional settings or nursing homes. To maintain the operating costs of new facilities or specialized care wings, all such institutions must receive the state and federal level reimbursement necessary for staff training and capital expansion purposes.

CONCLUSION: THE RIGHT TO NON-MARGINALIZING HEALTHCARE

For any of the above policy approaches to gain political traction, the concept of institutionalization must be reframed with respect to this population in question. HELP and HHS must encourage the system to provide community-based alternatives for younger, non-elderly patients requiring round-the-clock supervision. These non-elderly patients with chronic illness and/or disability should not be forced into a socially marginalizing future in a nursing home. These moral questions should lead efforts to reform this crucial healthcare delivery problem. Legal opinion can bolster any such social argument. Ensuring the healthcare rights of this population will ensure compliance with the Supreme Court's Olmstead decision.

The argument for cost-effectiveness is of similar value in promoting such policy. As previously outlined, this population requires round the clock-supervision and attention from properly trained medical staff. The current nursing home system suffers from high staff turnover and low retention rates. Such deficiencies affect all nursing home patients and confound the task of providing care to patients with varying levels

of disability and disease. Furthermore, nurses can spend a disproportionate amount of time tending to highly disabled patients in nursing homes. ¹⁶ This outcome is neither efficient nor cost-effective. Olmstead task forces can improve efficiency and cut nursing home costs by requesting specialized care development. Though infrastructural improvements may require significant investments, HELP should consider the resulting cost savings due to better care efficiency and improved nurse retention rates.

As state Medicaid waivers have been primarily used to increase community health alternatives, states may choose to allocate funds for specialized care wings. Following a more in-depth national assessment of the healthcare needs of this patient population, state and local government can request that waivers be used for such expansion based on demonstrated patient need.

As a first step, the healthcare needs of this population must be more fully understood on a state-by-state level, meaning that the combined leadership of HELP and HHS will be essential. Once these needs are assessed at the state level, Olmstead task forces can use Medicaid waivers to support this now marginalized patient community of roughly 200,000 Americans. In a healthcare delivery system that ignores the social and legal rights of these individuals, they should expect and demand more appropriate treatment.

Meeting the needs of this population would demonstrate socially progressive policy-making that recognizes the right to mental and social health in the face of physical illness or injury. Although the movement toward a personalized care approach has gained traction in community health settings, the bias toward institutions does not serve the young in nursing homes. This patient-specific approach to long-term care is defensible both on the basis of cost-effectiveness and unmet need.

NOTES

- Dirk Johnson, "Health: Long-Term Care; Many Nursing Homes Are Overlooking Needs of Younger Patients," *The New York Times*, January 28, 1988
- Nursing Home Survey Analysis, The Needs of Autoimmune Disease Patients Receiving Long-Term Care, Georgetown University, 2004.
- 3. Sara Rosenbaum and Joel Teitelbaum, Olmstead at Five: Assessing the Impact (Washington: Kaiser Commission on Medicaid and the Uninsured, 2004). See also, National Conference for State Legislators. The States' Response to Olmstead: How Are States Complying' http://www.ncsl.org/programs/health/forum/olmsreport.htm for various annual reports.
- 4. National Conference for State Legislators. *The States' Response to Olmstead: How Are States Complying*
- CMS, Reports on Medicaid Waiver Programs, 2005. See: http://cms.hhs.gov/medicaid.waivers.
- New Freedom Initiative, A Progress Report: March 2006. For further information, see: http://www.cms.hhs.gov/NewFreedomInitiative/.
- 7. CMS, 2005, op. cit.
- 8. "The Olmstead Decision: Implications for State Health Policy," *Health Affairs Magazine*, October 2000: 2-4.
- 9. Nursing Home Survey Analysis, op. cit.
- Understanding the Health-Care Needs and Experiences of People with Disabilities (Washington, DC: Kaiser Family Foundation. 2003).
- 11. "New Options for Long-Term Care," Inside MS June, 2004: 2-3.
- 12. Sheila P. Burke, Judith Feder, and Paul N. Van de Water (eds.), "Developing a Better Long-Term Care Policy, A Vision for America's Future: Final Report of the Long-Term Care Study Panel," National Academy of Social Insurance. November 2005, 1-10, 35, 44, 55-59. The report can be downloaded from: http://www.nasi.org/publications2763/publications_show.htm?doc_id=3 17974.
- O'Brien, Ellen, and Risa Elias. 2004. Medicaid and Long-Term Care: Update 2006. Washington: Kaiser Commission on Medicaid and the Uninsured: 19-20.
- 14. Sheila P. Burke et al., op. cit.
- 15. For more information on The Boston Home, see: http://www.thebostonhome.org/.
- 16. Nursing Home Survey Analysis, 2004, op. cit.

THERE IS PRIDE IN THE HARBOR: BALTIMORE'S FAÇADE

KATHERINE DENNY

ABSTRACT

aithful to its maritime and manufacturing history, Baltimore summoned its nautical roots to revitalize its downtown area and, in doing so, offered its constituents and visitors a counterpart to nearby Washington DC-a vibrant, historic harbor. Like many other industrial cities suffering from population lows and poverty highs after the World War II, Baltimore faced a challenge to reverse its urban decay and to reinvent its identity. Over the next half century, local and state officials remained committed to bolstering the city's morale by flirting with its major milestones and figures, and culture played a key role: Whether providing vital support and renovations to major collections of Baltimoreans, building grand aquariums, or organizing festivals, the city remained committed to the local culture and rejuvenated the pride of Baltimore. The success of the harbor in attracting tourism has been modeled by other cities. Its failure to upend extreme poverty and racial and class divides just outside the harbor has been criticized. If behind the harbor's façade the city's overall economy has hardly improved since the urban renewal began in the 1950s, what role, if any, has culture played in Baltimore beyond beautification?

A DYIN' CITY: AN INTRODUCTION

When in 1978 Nina Simone described a "city dyin'... In a hard town by the sea," there was little doubt that she sang of the slum-like conditions in which many Baltimoreans had lived for decades. Despite major revitalization efforts of city and state officials, the port town continued to suffer from the urban decay and heightened racial tension common among postindustrial societies—such as Detroit, Cleveland, and Pittsburgh—that no longer demanded the trade skills of its residents. To eradicate such conditions, Baltimore's administrations created cultural attractions as a form of urban beautification to bolster tourism and to gain national visibility. What more recent administrations have struggled with, however, is how to use the dozens of cultural treasures intermittently plopped by their predecessors in just two decades' time. Until recently, Baltimore's efforts have lacked an overall strategy to make real economic change throughout the city by targeting the affluent and tourists. What resulted instead was greater disconnect between Baltimore and Baltimoreans, further stifling economic growth.

Baltimore saw its first population declines in 1951 as residents fled to nearby suburbs, attracted to better employment opportunities, easier auto access, and air conditioned shopping centers; the decline of Baltimore's downtown began. The city dove quickly from the third largest in the nation to the twelfth, and though it was an area boasting two dozen colleges and universities nearby, it was also among the bottom ranked in educational attainment in its elementary and high schools.² Within a decade, city officials had recognized the importance in maintaining a vibrant city to stabilize its faltering economy.

Maryland Governor Theodore McKeldin quickly became a major stakeholder in the city's renewal plan, which focused primarily on the Inner Harbor because of its prime location on the water. A newly elected mayor at the time, William Schaeffer, has since become largely credited for the harbor's revitalization. He was also considered one of the "staunchest art supporters," and his use of art and culture as the staples of the city's redevelopment efforts was hailed as an "enlightened attitude" by the National Endowment for the Arts (NEA), and was regarded as a model of urban planning in NEA's publication "Baltimore: the Arts in a Proud City." By the end of his mayoral term and the beginning of his

gubernatorial in 1987, Baltimore's tourism scene had flourished.

Although Schaeffer's focus on the tourism industry and downtown area was highly respected by some, it was highly criticized by others, for Baltimore had become a city wrought with racial tension and extreme poverty levels just beyond the port. A shiny, cultivated harbor in tow of smiling elected officials, one must question what went wrong with the communities surrounding the focal point of the renewal plans: If you build it, visitors will come; but what about the locals?

A SHINY, CULTIVATED HARBOR IN TOW OF SMILING ELECTED OFFICIALS, ONE MUST QUESTION WHAT WENT WRONG WITH THE COMMUNITIES SURROUNDING THE FOCAL POINT OF THE RENEWAL PLANS: IF YOU BUILD IT, VISITORS WILL COME; BUT WHAT ABOUT THE LOCALS?

Baltimore's approach to culture always differed from other cities. There have been few celebrity architects, and the glamorous buildings of Bilbao and Denver did not fit within this historic seaport filled with maritime, aquatic, and scientific arts. Culture tended to cluster around the harbor, not simply because of its celebrated significance, but also because of the city's transportation infrastructure.

Despite the glorified façade of its harbor, Baltimore's economy has improved less than in the eye of the visitor. While filled with a sense of pride unparalleled since the industrial revolution, many Baltimoreans still feel the city is the "hellhole" portrayed in the hit HBO series, "The Wire." In early 2008, local professors condemned the city as "third world," accusing its leaders of "capital punishment" for the narrow focus on harbor development. Local and state officials returned to the drawing board to continue and rethink the city's revitalization plan. In June 2008, state officials revealed *ImagineMaryland*, a five-year strategic plan that calls upon the creative community to help bolster its economy.

A CITY OF MANY FIRSTS

Each of Baltimore's historic milestones foretells the urban and cultural focus of its future: Baltimore launched the first American Naval ship, the USS Constellation, still docked for all to see and explore; Baltimore began the first major rail system with the Baltimore & Ohio Railroad, an entrance of trade and commerce later resurrected with its Charles Centre; Baltimore has Johns Hopkins, the nation's foremost medical university, hospital, and research center; and Baltimore gave us the first African-American Supreme Court Justice, Thurgood Marshall, who spearheaded a fight against racial inequities familiar to Baltimoreans. The birth of such movements, industries, and individuals shaped the city's identity, and by summoning them in planning decisions, local leaders have not only preserved this identity, they have bolstered a confidence and pride in Baltimore.

THE BIRTH OF SUCH MOVEMENTS, INDUSTRIES, AND INDIVIDUALS SHAPED THE CITY'S IDENTITY, AND BY SUMMONING THEM IN PLANNING DECISIONS, LOCAL LEADERS HAVE NOT ONLY PRESERVED THIS IDENTITY, THEY HAVE BOLSTERED A CONFIDENCE AND PRIDE IN BALTIMORE.

Baltimore's maritime history was rooted in the shipbuilding industry of the 18th century.⁵ Such manufacturing in a young nation's most inland seaport led to the development of the Baltimore & Ohio Railway, the source of Johns Hopkins' great fortune. The wealth of Baltimore during its peak industrial years helped to establish the city's greatest assets, including its universities, libraries, and art collections. Individuals of this wealthy generation contributed to their hometown during a period of municipal competition, when cities raced for an edge in culture and trade to attract money and residents. William Walters' collection, housed at the Walters Gallery, is one of two major art collections created during this time; the other, of Claribel and Etta Cone, is a staple of the Baltimore Museum of Art. As one Bristish art critic once wrote, "both museums are

exemplars of the briefly fashionable taste of the selfmade rich whose fortunes were founded on liquor, railways, coffee, oil, industry and shops, men who were happy to exploit possessions to establish themselves as Baltimore's new society."6

When the industrial age ended post-World War II, Baltimore felt an immediate decrease in employment and population; the wealth soon followed. Theodore McKeldin facilitated the population depletion through his policies that built the Baltimore-Washington Expressway and opened the Chesapeake Bay Bridge—two easy routes to the new jobs and attractions in nearby suburbia. By 1950, Baltimore's population had peaked; by 1955, the great shipbuildling piers had "rotted"; and by 1958, the State recognized that Baltimore was home to "most of the elderly, most of the poor, most of the ill and indigent, and most of the slums of Maryland."

THE CITY'S RESPONSE TO URBAN FLIGHT

Baltimore's downward spiral during the 1950s led Mayor McKeldin to respond with an urban renewal plan that used the Inner Harbor as the focal point of development. This decision set priorities for decades. While his successor, Mayor William Donald Schaeffer, is later credited with the fruit of the harbor's revitalization, McKeldin is credited with the labor. McKeldin's formation of the Greater Baltimore Committee (GBC), a private group of local advocates and business leaders charged with improving the downtown area, led to the Charles Centre—the first new construction project downtown in three decades. The 33-acre complex was located near the downtown waterfront and was a mecca of finance, retail, and entertainment, attracting jobs and tourists alike; it was the first of many capital projects to come.9

McKeldin and the GBC, however, rarely focused on cultural development during these beginning stages, using retail, office space, and transportation as economic drivers. If not for the efforts of preservation activists, for example, McKeldin would have extended a congested I-95 highway through Fell's Point, which instead was preserved to become a National Historic Landmark in 1969. Other than introducing a Percent for Art program, a common government program through which 1% of capital budgets for public projects is spent on artworks, little cultural development took place during this period.

When voters approved a \$52 million bond in 1964 to fund the redevelopment of the harbor, the renewal plan included the creation of "residential, social, and cultural facilities," and focused largely on Baltimore's historical significance as a seaport and maritime industry.¹¹ In addition to a new retail center on the water called Harborplace, major cultural attractions followed that reinvented Baltimore's nautical pride, including a small fleet of anchored ships, and the Maryland Science Center with its grand planetarium.

When Schaeffer moved from Baltimore's City Council to City Hall in 1971, development plans were well underway for the Inner Harbor. Fidelity to the city's historical accomplishments was vital to the plan, and the first step had been to return the USS Constellation to its port, followed by the USS Torsk, and opening its bows to public tours. These vessels were key to proving the strength of the port: the former was the first naval ship sailed, while the latter the battleship that sank the last Japanese ship of World War II.

During this time, Schaeffer, GBC and local developer, James Rouse, were constructing the "anchor" of the Inner Harbor plan, Harborplace, which was completed in 1980. 12 Rouse, a major player in early urban revitalization efforts, played an integral role in Baltimore's development and went onto drive national urban policy. The construction of Harborplace prompted local, grassroots programs that created a cultural vibrancy to supplement the harbor. ArtScape, for example, began at this time near the newly developed site. 13

Eager for more tourism, Mayor Schaeffer oversaw further development of cultural growth throughout the harbor. In 1981, a 2,000-seat summer concert pavilion and home to the city's symphony, the National Aquarium, and the Baltimore Public Works Museum; these opened within two years of the completion of Harborplace. The city's existing Percent for Art Program began to flourish, and by 1980, 85 public sculptures were erected, including pieces by such renowned artists as Mark di Suvero and Robert Rauschenberg. A burgeoning tourism industry called for a formal visitor's center and more hotels. By 1988, 21 million people had visited the new Harborplace, and hotel space doubled, while property values tripled. 14

BALTIMORE'S CREATIVE STRATEGIES

Beyond increasing Baltimore's pride and tourism, however, the city's economy did not improve since renewal efforts began over five decades earlier, and some argue that the city continued to decay. During the largest building boom in the city's history, Baltimore "went from 30th to eighth on the Census Bureau's list of the nation's poorest cities."15 The racial tension that began during the Civil Rights Movement was heightened through the city's narrow focus on 110 acres of the Inner Harbor, which catered to mostly white out-of-towners and encouraged "just a few enclaves of high-income gentry" among "expanses of crumbling, crime-riddled neighborhoods populated by low-income renters."16 "White flight" continued throughout Schaeffer's term, when the city's employment "rose by less than 2%, compared with a 33% growth in the five surrounding counties."17

WHILE THE ARTS POPULATED THE DOWNTOWN AREA SINCE 1980 AND EVEN BEGAN TO DRAW NATIONAL ATTENTION, EDUCATION LEVELS DECREASED AND REACHED NATIONAL LOWS. THIS IS COUNTERINTUITIVE WHEN CULTURE AND EDUCATION ARE OFTEN CORRELATED.

While the arts populated the downtown area since 1980 and even began to draw national attention, education levels decreased and reached national lows. This is counterintuitive when culture and education are often correlated. Throughout the early stages of the renewal process, city leaders failed to integrate historic pride and connections of current residents of Baltimore, who had become largely African American. The harbor's facelift involved more of what Baltimore was, rather than what it had become.

By 1988, the city's residential population continued to decrease, teenage pregnancies and high school dropout rates skyrocketed, and "three-fourths of all city neighborhoods and 90% of black neighborhoods experienced increases in poverty." When Sheila Dixon, its second African-American mayor, was

elected in 1998, 60% of Baltimoreans were black, many of who were living in poverty. Originally, the renewal plan targeted mostly white, affluent suburbanites and tourists, and failed to recognize or integrate the local population in its efforts. Without effective arts education policies in Baltimore's public schools, and no real effort to attract local students to the harbor, the renewal strategy missed critical educational opportunities and fueled racial divides.

Subsequent administrations responded with cultural policies that moved beyond the tourism and beautification efforts of Mayor Schaeffer. In 2001, Governor Martin O'Malley, influenced by Providence Mayor Vincent Cianci, championed an Arts and Entertainment Districts initiative as part of a statewide "multi-dimensional economic development approach." The Maryland State Arts Council (MSAC), a component of the Department of Business and Economic Development, oversaw the implementation of the districts plan. City officials identified two arts and entertainment districts for rezoning in Baltimore—Station North in 2001 and Highlandtown in 2003—and offered property credits and tax incentives to attract creative residents. ²⁰

In 2000, the Frederick Douglass-Isaac Myers Maritime Park and Museum opened, which intertwined contributions to the manufacturing boom through the recreation of Baltimore's first shipyard and railway operated by African Americans. When the Reginald F. Lewis Museum of Maryland African American History opened its doors in 2005, it reflected a pride within Baltimore absent from other cultural institutions. It was considered a place "for black people [to] see a history that was ignored for so long, and for white people who see a history many wished to deny for the longest time."21 Housed in what used to be the Baltimore City Jail, the museum confronted the inequities of its past, and highlighted the once quiet contributions of African Americans throughout Baltimore's development, from its time of slavery to its time of jazz.

Among these new initiatives and institutions, Baltimore's tradition of intertwining arts and culture with tourism continued, and in 2002, the Mayor's Advisory Committee on Art & Culture merged with its Office of Promotion to create Baltimore's Office of Promotion & Arts (BOPA), which oversees festivals and special events, such as ArtScape, and administers

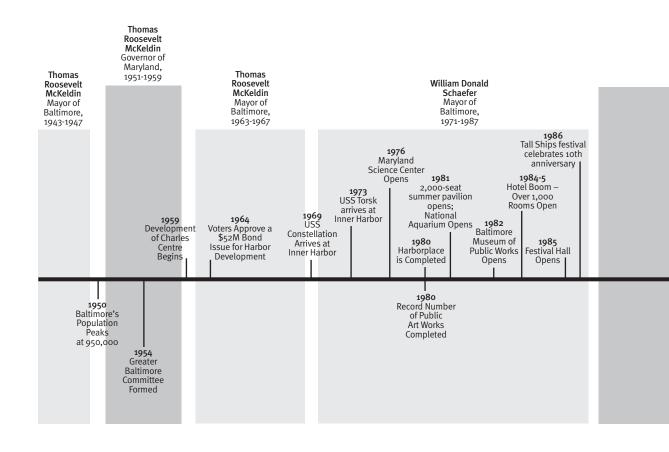
public support to Baltimore's arts organizations and artists.²² This quasi-government agency, however, has gone beyond attracting vacationers and used models, such as adaptive reuse to position artist housing in the downtown area. In 2008, BOPA opened the historic Bromo Seltzer Tower, which was built in 1911 by Captain Isaac Emerson, inventor of the headache reliever Bromo Seltzer, and was once hailed as the city's tallest building; now, it houses artists and art studios.²³

RESULTING RENEWAL

By 2004, Baltimore's "chronic" population decline "slowed to a trickle" and its violent crime rate dropped by 20%. ²⁴ The following year, that decline leveled off and, by 2006, the city felt its first population increase in decades. What occurred, according to Donald Fry, then GBC President, was a "strong economic surge" over eight years, causing higher per capita income and lower homicide rates. ²⁵ He also argued that Baltimore's class divides have weakened, citing its diverse income levels and its ranking as "seventh in the nation for downtown residential density."

Critics of the city's success disagree with Fry's assessment, comparing his figures to the Baltimore at its peak in 1950: "Today, the city has a population that is almost 50% smaller, and about 40% of families with children live at or near the federal poverty line." Despite a relative population increase, employment retention remains a challenge for the city against its nearby competition. Baltimore lost 46,800 jobs during the 1990s and another 33,600 jobs from 2000 to 2007; whereas, the surrounding area grew by 25% and 14%, respectively. Amid these struggles, however, the city's cultural vibrancy led Baltimore to be named among the top ten "Up and Coming Summer Destinations" by *Frommer's*, next to Barcelona and Belize.

In 2008, Maryland announced *ImagineMaryland*, a blueprint for cultural planning in an effort to help stimulate the economy. The plan identified opportunities from 2008 to 2013 to "enhance the role of the arts" in economic development. ** *ImagineMaryland* is in part a response to recent studies that have analyzed the impact on local economies of the creative sector. In 2007, the Maryland Department of Business and Economic Development released a study finding that the arts

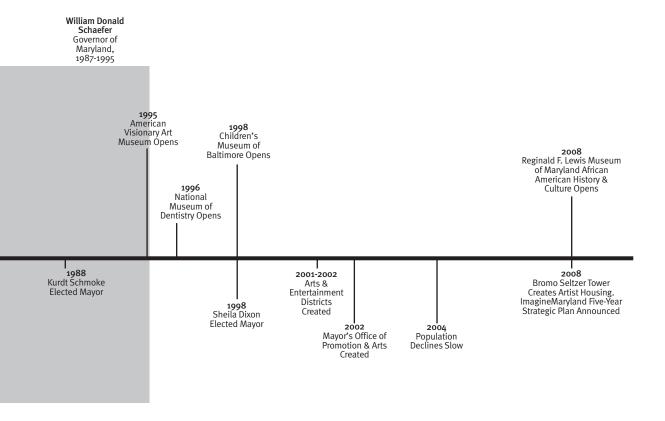


generated "an estimated \$37.3 million in state and local taxes... and provided 13,762 full-time jobs."²⁹ In the Baltimore region alone, the arts contributed \$619 million in economic impact and provided 8,066 arts-related jobs.³⁰

CONTINUING AN UPSWING

Unfortunately for Baltimore, its city officials' focal point had always had distinct borders outside of which slow progress, if any, was made in terms of economic impact and population increase. More relevant than the lack of transportation infrastructure was a mayor creating a pretty picture prior to a gubernatorial race, a façade to mask surrounding conditions. Mayor Schaeffer admitted to the intangible effects of his progress; "I don't know how to define it," he said, "but I can feel it." Fortunately for Baltimore, this "feeling" has created a pride in the city's history, and at least paved the way for cultural policy beyond tourist attractions alone, which created more visitorship than jobs.

Under Governor O'Malley and Mayor Dixon, Baltimore is finally on a population and an economic upswing. Its turning point was greater concentration on cultivating residents and community. The development of arts districts and public support for artists studios attracted more residents, while cultural institutions and events focusing on African-American heritage targeted the surrounding community. Regional meetings for *ImagineMaryland* were held in Baltimore through December 2008, followed by a period of public comment still under review. The final strategic plan that emerges will be telling: the city's administrations have been artistically supportive and significant, drawing districts that even New York City hesitates to draw.



NOTES

- 1. The RAND Corporation categorized these four cities as "once affluent manufacturing centers... facing major economic adjustments as employment in the manufacturing sector has lagged. See Rand Corporation 2007 report, "Arts and Culture in the Metropolis."
- 2. See "Baltimore; Oh, Say Can You See?" in *The Economist*, 27 August
- See Phil McCombs, "Art and Politics," The Washington Post, 28 September 2008.
- Steven Hanke of Johns Hopkins and Stephen Walters of Loyola College lamented Baltimore in a recent op-ed piece, "Blame Taxes for Baltimore's Rot," *The Wall Street Journal*, 5 July 2008.
- This includes the purchase of Cole's Harbor (later named the "Inner Harbor") and the warehousing and docking activities of William Fell (his property later called "Fell's Point").
- See Brian Sewell, "Costly Hors d'Oeuvres from Old Baltimore," The Evening Standard (London), 27 July 2001.

- Theodore McKeldin held the mayoralty of Baltimore and governorship of Maryland from the early 1940s through the late 1960s.
- 8. See "What is Reviving Baltimore?" *Business Week*, Industrial Edition, 15 August 1977.
- 9. See "What is Reviving Baltimore?" *Business Week*, Industrial Edition, 15 August 1977.
- See the The Preservation Society, "Mission Statement" webpage: http://www.preservationsociety.com/PS2005missionstatement.html.
- See Baltimore Area Convention and Visitors Association. Inner Harbor Timeline: http://baltimore.org/misc/uploads/meetingplannerspdf/Inner_Harbor_T imeline.pdf.
- 12. Ibid.
- 13. Artscape is a yearly event that has become the nation's largest free art festival. See Edward Gunts, "Roomier Artscape peeks into the future," *The Baltimore Sun*, 21 July 2008.

- 14. See "Baltimore; Oh, Say Can You See?" The Economist, 27 August 1988.
- See Tom Kenworthy, "Two-Edged Sword; Candidate Schaefer Gets Praise, Criticism for Baltimore Alchemy," The Washington Post, 2 September 1986.
- 16. See Steve Hanke and Stephen Walters.
- 17. See Steve Hanke and Stephen Walters.
- 18. See Tom Kenworthy, op. cit.
- Providence Mayor Ciani was the first mayor to oversee legislation to create cultural districts. See "Maryland Arts and Entertainment Districts Program," Maryland State Arts Council (MSAC) webpage, http://www.msac.org/artists.cfm?sec=Artists&id=325.
- 20. Ibid
- See Michael Olesker, "Museum Puts Faces, Names to Struggle for Justice," *The Baltimore Sun*, 28 (June 2005).
- See Baltimore Office of Promotion and the Arts, "About Us" webpage, www.bopa.org.
- 23. See Bromo Seltzer Tower, "History" webpage, http://www.bromoseltzertower.com/history.cfm
- See Donald Fry, "Greater Baltimore Had Many Successes in 2004, but Work Still Needs to be Done," *Baltimore Business Journal*, 24 December 2004.
- See Donald Fry, A Letter to the Editor: "Baltimore is Making a Comeback," The Wall Street Journal, 19 July 2008.
- 26. See Steve Hanke and Stephen Walters.
- 27 Ibid
- See Maryland State Department of Business and Economic Development, "Governor O'Malley Invites Public Participation, Launches Imagine Maryland to Strengthen Community," Press Release, 18 June 2008.
- See Maryland State Arts Council, "Arts Generate Record-Breaking \$1.05
 Billion in Economic Impact for Maryland," Press Release, 7 February 2007.
- 30. Ibid.
- 31. See Tom Kenworthy, op. cit.

BOOK REVIEW

THE GREEN COLLAR ECONOMY: HOW ONE SOLUTION CAN FIX OUR TWO BIGGEST PROBLEMS

by VAN JONES

2008 New York, Harper Collins, 238 Pages ISBN# 978-0-06-165075-8

REVIEWED BY PATRICIA BERTUCCIO

he current state of affairs in the United States has the news buzzing with reports of stimulus packages, sky-high unemployment rates, and calls to protect our environment.

Van Jones provides an optimistic antidote to solving these problems in his first book, *The Green Collar Economy*. He has written a book that is one-half rallying cry for socio-economic and environmental justice and one-half policy proposal for action. The focus on social issues in his analysis places the emphasis on racial and economic boundaries that have limited full inclusion in American society. He establishes a case for social and environmental responsibility that creates a green economy via a road map of action and policy that can create jobs, improve communities, and reduce destruction to the environment.

Coined the "New Green Deal," Mr. Jones aims to address policy makers at all levels of government as well as the next presidential administration. Written prior to the 2008 presidential election, he calls for the government to end subsidies for oil, gas, and coal

THIS WILL EMPOWER PEOPLE WITH NOT ONLY FAITH IN A GREENER LIFESTYLE, BUT WITH SKILLS AND OWNERSHIP OF THIS GREEN MOVEMENT.

industries and redirect its investments toward clean energy, such as wind and solar power. This will empower people with not only faith in a greener lifestyle, but with skills and ownership of this green movement.

In the course of making his case for why green jobs are the way to go for America, Mr. Jones provides a broad background of social justice and environmental historical context. He demonstrates that the idea for this new avenue of the economy is not an isolated idea, but a progression of America's development. This change to the economy is the logical next step of where Americans should and need to go as a nation.

In the spirit of the President Obama's long-run campaign and his community organizing background, Mr. Jones believes that society should form a "Green Growth Alliance" of laborers, social justice activists, environmentalists, students, and religious organizations. By securing union support, they can help redirect the work force toward retrofitting buildings, constructing greener buildings, and establishing win-win relationships with business owners who want a greener future.

Mr. Jones does not see the work of the green collar economy as an isolated effort, but as an encompassing process for all members of society. For this ambitious endeavor to be truly successful, he advocates full inclusion across socioeconomic boundaries. Social justice activists are asked to keep lobbying for economic justice, civil, immigrants', women's, and disability rights, and all the minority groups to ensure the principles of diversity and inclusion are part of the new green economy.

Mr. Jones charges environmentalists with closely coordinating with social justice groups to tear down

GENERATION OF LEADERS THAT NEED TO GARNER KNOWLEDGE AND CREATE GREATER AWARENESS OF THE GREEN MOVEMENT TO PREVENT CATASTROPHIC CLIMATE CHANGE.

the perception of greening as an elitist movement. The knowledge, experience, and budgets of these groups are needed to move forward with a universal environmental outreach that touches the poor, rich, big and small business.

Mr. Jones has incredible faith in our future in the hands of generations fully educated on environmental awareness. Students are the next generation of leaders that need to garner knowledge and create greater awareness of the green movement to prevent catastrophic climate change. These future leaders can teach their peers and elders about reducing their carbon footprint for a more sustainable world, but this education must start now.

The proposal that Mr. Jones has put together does not only include the involvement of job creation. He calls upon faith organizations to unite congregations and promote "social uplift environmentalism." Churches during the Civil Rights Movement, he shows, were a shining example of social change.

Beyond the work of groups, there is also a section of the book where the individual is called upon to change not only his or her actions toward a greener lifestyle, but his or her respective mentalities toward helping others. Mr. Jones believes people cannot change our community and our world until they change themselves.

Mr. Jones' book calls upon all generations and groups—students, policy makers, public servants, lawyers, and religious leaders—to take ownership of this new green economy. The world Americans want in the future is the centerpiece of his argument as socio-economic equality, job creation, and environmental justice issues affect everyone. With each group doing its part, Mr. Jones believes the country can emerge from the financial crisis, help the

poor, and save the planet. He is sure that "many of the best people in the country and the world have not been heard from yet." He is talking to the next generation of public servants—the Wagner community included.

Van Jones is a Yale Law School graduate and the founder and president of Green for All, a national organization dedicated to building an inclusive green economy strong enough to lift people out of poverty. He is also a senior fellow at the Center for American Progress and a fellow at the Institute of Noetic Sciences. Jones serves as a board member for numerous environmental groups, including 1Sky and the Apollo Alliance.

MITIGATING THE NEIGHBORHOOD EFFECTS OF LENDER HOMEOWNERSHIP IN EASTERN QUEENS

CORINNE GENTILESCO, ANNIE MYERS, AND ABIGAIL WESTBROOK

ABSTRACT

his paper presents a comprehensive analysis of the neighborhood effects of post-foreclosure bank ownership of homes in Eastern Queens, particularly Jamaica and South Ozone Park. Such bank ownership is commonly referred to as "Real Estate Owned," or "REO." The study describes the relationship between subprime lending, foreclosure, and vacancy, and details the negative implications for homeowners, neighborhoods, local governments, and lending institutions. Finally, this paper proposes several creative mitigation strategies to address those impacts.

INTRODUCTION

"A vacant home is like cancer for a block; it hurts everyone nearby, whether it's because of squatters, poor maintenance, or increased crime. Vacant homes affect everyone's quality of life."

—Elizabeth Braton¹

Elizabeth Braton, Chairperson of Queens Community Board 10 (CB 10), knows all too well the catastrophic effects of bank ownership on residential property in South Ozone Park, a neighborhood within Community District 10 in Eastern Queens. The residents of South Ozone Park, as well as their neighbors in Jamaica Queens, Community Board 12 (CB 12), currently face a housing crisis unlike any other in New York City.

The diverse communities of South Ozone Park and Jamaica include large African American, Hispanic, Asian, immigrant populations, and families earning primarily low- and middle-incomes. And they are no strangers to difficulties with housing: during the 1970s fiscal crisis, these blocks suffered the most when the City responded to widespread abandonment by foreclosing on properties. Queens CB 12 District Manager Yvonne Reddick says, "These two years are not the first that Jamaica has known [its] numbers to be the worst in the city.... In rem is what we used to call it; now we call it foreclosure."²

ACQUIRED THROUGH IN REM FORECLOSURE ACTIONS TENS OF THOUSANDS OF TAX DELINQUENT PROPERTIES, MAKING THE DEPARTMENT OF HOUSING PRESERVATION AND DEVELOPMENT (HPD) THE SECOND BIGGEST LANDLORD IN THE CITY AFTER THE NEW YORK CITY HOUSING AUTHORITY.

In the 1970s New York City acquired through in rem foreclosure actions tens of thousands of tax delinquent properties, making the Department of Housing Preservation and Development (HPD) the second biggest landlord in the City after the New York City Housing Authority.³ Many Brooklyn and Queens in rem properties became part of the City's affordable housing programs. In 1974, sufficiently low home prices, combined with sufficient resources, allowed community nonprofits such as Neighborhood Housing Services of Jamaica (NHS Jamaica) to buy empty homes, rehabilitate them, and return them to the market. 4 Today, however, lenders market foreclosed Jamaica homes for hundreds of thousands of dollars in order to recoup their losses on defaulted mortgages—far more than housing nonprofits can afford.⁵

Since the period of widespread vacancy and abandonment in Eastern Queens thirty years ago, steady occupation of homes and increased development have restored a sense of community to the area. In 1993, the New York Times described Jamaica: "Up and down the district's streets, the onceshuttered retail storefronts are virtually all occupied. People bustle along sidewalks, swarming a recently arrived department store called Wertheimers, scores of smaller merchants, Iranian jewelry vendors, and food stands serving West Indian dishes."6 In 2003, the completed Jamaica Station connected multiple subways, the Long Island Railroad (LIRR), and the Airtrain to John F. Kennedy International Airport together in a single hub. In 2007, the City Council approved the largest rezoning plan in the city's history: 368 blocks allotted for major retail and residential development in the neighborhood.⁷

The current foreclosure crisis unexpectedly descended upon many residents who had invested in the growing community over the past thirty years. One small South Jamaica enclave serves as a particularly sobering example: between January 2006 and June 2008, ninety-eight properties between 145th and 147th Streets and bordered by Linden and Foch Boulevards—a three-by-three block area—entered foreclosure.⁸

Most residents of properties in foreclosure have no choice but to move out, or move out at the first sign of trouble, leaving their former neighborhoods dotted with excessive numbers of vacant homes. In Jamaica, The Daily News reports: "Friendly streets once populated by predominantly black, working-class families in starter homes are now haunted by drug dealers and squatters." In Queens and elsewhere, foreclosure takes a heavy toll even on those who manage to keep their homes.

While the comparatively strong housing market of New York City has helped the City at-large avoid the hardships endured by Atlanta, Cleveland, and Detroit, 10 strong evidence suggests that Eastern Queens neighborhoods suffered disproportionately from predatory lending. Reporting on rates of subprime lending in New York City, the Furman Center for Real Estate & Urban Policy (Furman Center) recorded that in 2006 subprime lenders issued 46% of home purchase loans in Jamaica and 34.1% in South Ozone Park.¹¹ It is little surprise that these high rates of subprime lending have translated into increased mortgage defaults and foreclosures, forcing residents in Eastern Queens to struggle to keep their homes, maintain and revitalize their increasingly vacant neighborhoods.

This study addresses the interwoven themes of subprime lending, bank foreclosure, and vacancy in Jamaica and South Ozone Park, the two neighborhoods in Queens most severely affected by high numbers of foreclosures. The following sections describe in detail the detrimental impact of concentrated foreclosure and subsequent bank ownership on homeowners, neighborhoods, governments, and lending institutions; and culminates with a set of recommendations for the prevention and mitigation of those effects. While the recommendations speak specifically to the needs of Eastern Queens, some may be relatable to other distressed urban communities.

REAL ESTATE OWNED AND FORECLOSED HOMES IN EASTERN QUEENS¹²

In the Eastern Queens communities of Jamaica and South Ozone Park, the highest subprime lending and foreclosure rates in the region led to a glut of bank-owned (commonly referred to as "Real Estate Owned" or "REO") homes available for sale. As the housing and credit markets continue to weaken and the resale value of these homes drops, the number of REO homes for sale translates to an ever-increasing burden of vacant properties on these neighborhoods.

66 IN 2008, QUEENS SAW AN UNPRECEDENTED 73% OF HOMES FAIL TO SELL AT AUCTION AND REVERT TO THE LENDER.

In 2008, Queens saw an unprecedented 73% of homes fail to sell at auction and revert to the lender. At the end of September 2008, almost 75% of those homes remained vacant and on the market.¹³

According to PropertyShark.com's third quarter 2008 Foreclosure Report, the number of new foreclosures in New York City reached a two-year high in the third quarter of 2008, largely due to the spike in Queens and Staten Island foreclosures. 14 The report defines a foreclosure as a property with a foreclosure auction scheduled to take place for the first time during the reported-on quarter. 15 With the exception of the Bronx, all New York City boroughs experienced a rise in new foreclosures from the third quarter of 2007, with one in every 1,163 homes in Queens scheduled for auction—an increase of 100%.16 An October 2008 RealtyTrac search revealed that 12% of properties in Jamaica, 10.1% in South Jamaica, and 21.3% in Hollis and St. Albans were in distress, meaning they were in pre-foreclosure (notice of default or lis pendens filed in court), foreclosed, or REO.17

THE PHYSICAL, SOCIAL, AND ECONOMIC EFFECTS OF CONCENTRATED REAL ESTATE OWNED (REO) HOMES

It is well documented that high foreclosure rates seriously and demonstrably distress the physical, social, and economic integrity of neighborhoods. Not only does foreclosure correlate with vacancy (which forecasts building deterioration, increased crime, and sanitation and safety problems), but it also leads to overall community instability and the diminishment of social ties. These factors are reflected in a downturn in the local economy and a decline in property values.

Physical Impact

One of the first visible signs of foreclosure-related vacancy is a decline in a property's appearance and upkeep. Cathy Mickens of NHS Jamaica, also a Jamaica resident, describes a house on her block that

has been left open and vandalized, where weeds have grown high, and mail and litter are strewn across the grass and sidewalk. "Garbage is being dumped in the back," she says, "and rats have moved onto the lot." District Manager Karyn Peterson of Queens CB 10 started documenting community members' complaints regarding the houses on their blocks that are accumulating debris, becoming overgrown, and presenting unsafe conditions. 19

Throughout the United States, an increase in vacant homes corresponds with increased reports of drug users, prostitution, squatters, and other illegal activity. In a 2005 paper prepared for the Woodstock Institute, Dan Immergluck and Geoff Smith calculated that "about 2.8 foreclosures for every 100 owner-occupied properties in one year correspond to an increase in neighborhood violent crime of approximately 6.7 percent." ²⁰

In New York City, residents and community leaders in high-foreclosure areas report similar rises in crime. The telltale indicators of vacancy, such as "no trespassing" signs, lawn litter, and graffiti all seem to draw illegal activity. One resident of 118th Street in South Ozone

THE TELLTALE INDICATORS OF VACANCY, SUCH AS "NO TRESPASSING" SIGNS, LAWN LITTER, AND GRAFFITI ALL SEEM TO DRAW ILLEGAL ACTIVITY.

Park told the *Daily News* that vagrants turned a foreclosed home on her block into a crack house: "You see drugs, you see young kids coming through, adults passing through. It's a disaster." Another resident of Jamaica commented to the *New York Times* that his 15-year-old son found a drug user's syringe in the yard of the empty house next door.

Social Impact

In addition to contributing to the physical deterioration of a neighborhood, foreclosures disrupt communities by forcing the dislocation of homeowners and renters, increasing local homelessness, and destabilizing families with small children. Furthermore, these effects are likely to exact a greater toll on minority communities.

In the course of working with distressed homeowners, researchers at the Office of New York Senator Jeff Klein found that in the Bronx and Westchester neighborhoods served by the Senator, foreclosure-related turnover threatened the social fiber of the communities by dislocating long-term homeowners. ²³ A substantial number of recent foreclosures arose in the district when fiscally solvent homeowners decided to extract some of the equity from their homes in order to send children to college, pay off credit card bills, or finance a family wedding. When homeowners in similar situations refinance their traditional mortgages with riskier instruments, they may find themselves at risk of losing the homes they have lived in for twenty-five years. ²⁴

As the number of foreclosures continues to rise, increasing numbers of low-income renters are caught off-guard when their landlords default on their mortgages. The Furman Center estimates that approximately 38,000 New York City residents lived in buildings in which foreclosure proceedings commenced in 2007. The picture for 2008 looks equally grim, if not more so. The *Daily News* reports that between April and October of 2008, banks filed 871 foreclosure-related evictions on 480 Queens properties, the most severely affected neighborhoods being Rochdale Village in South Jamaica, with 41 evictions; Far Rockaway, with 38 evictions; and South Ozone Park, with 32 evictions.

Former homeowners and evicted renters alike face the risk of becoming homeless. The National Coalition for the Homeless (NCH) recently published a study on the relationship between foreclosure and homelessness. According to NCH, "nearly forgotten in this crisis are the thousands of homeowners and renters who have become homeless once their equity is exhausted. Having no other financial resources, they are moving in with relatives or friends, are turning up in local emergency shelters, or have actually found themselves on the streets." In conducting a national survey of local and state homeless coalitions, NCH found that 61 percent of respondents "had seen an increase in homelessness since the foreclosure crisis began in 2007.

Foreclosures have a particularly heartbreaking effect upon the educational and developmental welfare of children. According to developmental psychologist Margo Candelaria and colleagues, stable housing "is

FORECLOSURES HAVE A PARTICULARLY HEARTBREAKING EFFECT UPON THE EDUCATIONAL AND DEVELOP MENTAL WELFARE OF CHILDREN.

the bedrock that anchors [children] to schools, neighborhoods, medical services, child care, and social services."³⁰ A May 2008 report by First Focus, entitled *The Impact of the Mortgage Crisis on Children*, estimates that in New York State alone, 45.4% of households facing foreclosure are families with children, and home foreclosures will directly affect 106,500 New York children in 2008 and 2009.³¹ The consequences of frequent moves can include behavioral problems, learning deficiencies, deteriorating school performance, and health and emotional difficulties.³²

Foreclosures also disproportionately affect people of color, both in New York City and elsewhere. Although the extent to which the disparity reflects invidious discrimination on the part of lenders has not been proven conclusively, it is clear that minoritydominated neighborhoods, including South Ozone Park and Jamaica, Queens, bear the brunt of predatory lending and its inevitable effects.³³ According to the 2000 census data, Queens CB 10 and 12 both accommodate majority minority populations: CB 10 is home to 34% white residents, 17% black/African American residents, 13% Asian residents, 21% Hispanic residents, and smaller numbers of American Indian, Pacific Islander, mixedrace and other race individuals.³⁴ The demographic composition of CB 12 includes 72% black/African American residents, 14% Hispanic residents, and smaller numbers of white, American Indian, Asian, Pacific Islander, other race, and mixed-race individuals.35

Reports suggest that disparate effects of subprime lending on minority communities will continue even beyond the initial wave of foreclosures. Furman Center research indicates that, following the bursting of the subprime bubble and the contraction of mortgage markets, black and Hispanic prospective homebuyers have found and will continue to find it increasingly difficult to access credit, whether subprime or prime.³⁶ Between 2006 and 2007, home

purchase loan originations dropped by 44% for black New Yorkers and by 34% by Hispanic New Yorkers, as compared with a 3% decline for white New Yorkers.³⁷ The disparity in credit access has changed the racial composition of New York homebuyers so that, in the words of Ingrid Ellen, co-director of the Furman Center, "We could be on our way to reversing many of the advances that we've made in minority homeownership."³⁸

Economic Impact

Beyond the direct economic impacts of foreclosure on homeowners, the resulting vacancies also cause devastating financial losses to cities and lending institutions. A 2006 Fannie Mae Institute study conducted by Dan Immergluck and Geoff Smith, using data from the City of Chicago, concludes that every foreclosure within an eighth of a mile radius of a single-family home reduced the value of that single-family home by between 0.9% and 1.136%, corresponding to a citywide loss in valuation of between \$598 million and \$1.39 billion (between \$159,000 and \$371,000 per foreclosure). Furthermore, the report suggests, costs increase significantly when properties are not efficiently returned to the open real estate market.

This past summer, the Center for Responsible Lending issued a report estimating that between late 2008 through 2009 in the State of New York, it is expected that approximately 3.5 million homes will experience property devaluation as a result of proximity to 122,192 foreclosures. The Center estimates a staggering average decline in property value of \$18,117 per home, for a total statewide loss of \$64,362,000 in property value.⁴¹

Beyond the devaluation of property, cities lose revenue from utility service fees and from delinquent or otherwise uncollected property taxes. Cities bear the increasing expenditures of judicial resources, resulting from foreclosure, lien, and other housing proceedings. ⁴² In addition, they may see the cost of public safety enforcement and fire prevention/ suppression increase and an added administrative burden from the increased need to register vacant properties, inspect buildings, and provide sanitation services. ⁴³ Indirectly, local governments feel the pinch of lost business, sales, and income taxes where concentrations of foreclosed properties discourage commerce. ⁴⁴

Lending institutions must absorb a number of costs associated with holding REO properties in portfolio, such as interest, real estate taxes, insurance, maintenance and other repairs (both labor and costs), and marketing. Furthermore, banks must account for appreciation or depreciation of the value of a home. 45 These costs fluctuate, depending on the condition and value of the property, and the length of time the property is in a servicer's portfolio.

RECOMMENDATIONS FOR EASTERN QUEENS

Given the existence of community-wide effects, policymakers would do well to adopt a comprehensive approach to stabilizing Eastern Queens, in which homeowners, city agencies, community groups and lending institutions each have a role to play. The following section sets out several possible strategies for mitigating the impact of concentrated REOs.

INFORMATIONAL ACCURACY AND TRANSPARENCY

First, foreclosure and bank ownership data must be made accurate and transparent. Virtually all nonprofit, academic, and government leaders working on this issue share a frustration with the inaccessibility of REO property data and current title information. HPD reports that public homeownership data sources tend to be inaccurate and out-of-date, 46 while private sources, such as LoanPerformance, tend to be prohibitively expensive for researchers. In addition, foreclosure figures are not always broken down to isolate REO data. 47

When it is unclear who holds a title to a particular property or if that information is not easily accessible, it is difficult for neighbors of REO properties and local officials to push for housing code compliance.⁴⁸ Neighborhood Housing Services suggests that titles should be more quickly and accurately recorded. 49 Karyn Peterson of Queen CB 10 advocates for requiring lending institutions to provide government agencies with a local contact, or a management company responsible for property maintenance.⁵⁰ Increasing the transparency of the trail of ownership by financial institutions and servicing by their contractors will enable efficient data collection and analysis by policy-makers. Additionally, increasing informational transparency will allow for more effective code enforcement and facilitate adjudication of mortgage foreclosures.

PROACTIVE LOAN MODIFICATIONS

The problems associated with concentrated REOs begin with risky mortgage lending and inflexible loan management. A proactive, community-based approach to identifying distressed borrowers before the foreclosure process begins will maximize borrowers' opportunities to modify problem loans. To that end, the nonprofit housing organizations that serve CDs 10 and 12 should look to the example of the Belair-Edison Neighborhood Initiative in Baltimore, Maryland.

Belair-Edison, a lower and middle-income neighborhood on the edge of East Baltimore, had one of the area's highest foreclosure rates in the 1990s. Between 1993 and 2003, one in three Belair-Edison homeowners lost their homes.⁵¹ In response, a nonprofit called the Belair-Edison Neighborhood Initiative redoubled their outreach efforts by advertising in a community newsletter and, most importantly, using public records to identify residents with high-interest or adjustable-rate mortgages and reach them before defaults on their mortgages occurred.⁵² Thomas Perez, Maryland's Secretary of Labor, Licensing, and Regulation, credits the Initiative's proactive approach with a more than 33% decline in local foreclosures.⁵³ The Initiative also contacts the homeowners identified through public records searches and offers free counseling and access to low-cost housing alternatives.⁵⁴

The neighborhoods of Eastern Queens would greatly benefit from local implementation of these types of preemptive measures. By using public records to identify at-risk borrowers (generally holders of adjustable and high-interest rate mortgages) early and working with borrowers to pursue renegotiation of mortgage terms before default occurs, Queens community development groups could drastically affect the local foreclosure rate.⁵⁵

SYSTEMATIZATION OF SHORT SALES

When loans cannot be renegotiated, an alternative option is the provision of resources to distressed homeowners, servicers, and potential buyers to facilitate short sales. Short sales involve an agreement between a distressed homeowner and a foreclosing lender to avoid the foreclosure process. ⁵⁶ A homeowner who owes more on his/her mortgage than the property is worth agrees to list the property

for sale, and the lender agrees to pay off the mortgage for a mutually agreed-upon selling price.⁵⁷ A short sale can be beneficial to all parties: the distressed borrower may recoup some of his/her equity and avoid foreclosure, while the lender avoids the costs associated with the foreclosure process and post-foreclosure property maintenance. Short sales may also provide an opportunity for first-time, qualified homebuyers to purchase a discounted property.

Local nonprofits have begun the process of developing a short sale program for New York City. The Center for New York City Neighborhoods (CNYCN) recently received a Living Cities grant to explore the feasibility of a short sale brokerage

66 LOCAL NONPROFITS HAVE BEGUN THE PROCESS OF DEVELOPING A SHORT SALE PROGRAM FOR NEW YORK CITY.

program. ⁵⁸ They plan to streamline the process for identifying distressed borrowers and connecting them with pre-approved brokers and qualified potential homebuyers. CNYCN will guide the development and implementation stages of this process, with the goal of achieving an efficient process that requires minimal administrative oversight and commitment of resources. ⁵⁹ Neighborhood Housing Services (NHS) will spearhead the second component of the program: development of a mission-driven brokerage within the organization. ⁶⁰

HOUSING MAINTENANCE CODE ENFORCEMENT

If the credit crunch or other market conditions prevent a home from passing quickly into the hands of a responsible owner, the surest and most costeffective way to maintain neighborhood stability is to enforce property maintenance regulations against lender-owners. Community members in the midst of the crisis agree. Queens CB 10's Elizabeth Braton says, "It needs to be a major violation to leave houses vacant and unmaintained." By piggybacking on the housing code already in place and streamlining fine collection and lien enforcement, New York City stands to minimize many of the deleterious effects of bank ownership, while recouping much of its outlay for increased enforcement.

Without a mechanism in place to police upkeep responsibilities, there is little incentive for banks to contract with an adequate number of servicers to perform necessary property maintenance. In order to hold banks accountable, either by performing the repairs directly and requiring the lender to repay the cost or, alternatively, by imposing a criminal of hefty civil penalty, the City must develop a comprehensive reporting system for violations and have access to upto-date, accurate title information, so it knows whom to penalize. The Mayor's Office of Operations has spearheaded the effort to centralize some violation information by creating a Street Conditions Observation Unit (SCOUT) to travel city streets systematically and report on conditions such as graffiti on private and commercial buildings, illegal dumping, unclean vacant lots, derelict vehicles, and unsafe construction sites. 62 Inspectors call in their findings to 311, the City's customer service phone line, and the information is relayed to the appropriate agency, such as the Department of Transportation (for potholes, and so forth.), the Department of Sanitation (for garbage), or the Department of Environmental Protection (for street cave-ins).⁶³ Call data are available on the Mayor's Office of Operations Web site, which includes searchable maps.

Although SCOUT inspectors report on many conditions applicable to vacant residences, such as illegal dumping, graffiti, and derelict cars, they do not currently report on other housing safety issues, such as weed overgrowth, prolific lawn litter, evidence of squatting, non-boarded or otherwise unsecured vacant homes. The City should entrust SCOUT inspectors with collecting this information as well, such that the City can rely on its current call-in and referral system to log, track, and assign accountability for the kind of violations that attend foreclosure and bank ownership of residential property.

Undoubtedly, an improved housing conditions' reporting system will translate to a higher frequency of service calls to City agencies, perhaps HPD most of all. A special effort should be made to appropriate funds for increased Housing Maintenance Code enforcement, as increased enforcement will allow the city the protect one of its most important sources of revenue: property values. Joe Courtien, HPD's Citywide Chief of Code Enforcement Inspectors, confirms this idea: "Money put towards keeping up the housing stock would be money spent wisely." 64

THE RENT-TO-OWN MODEL

One frequently discussed strategy for minimizing foreclosure-related dislocation and vacancy involves allowing renters to stay in their units after ownership of a two-to-four family home has reverted to the lender. Allowing renters to stay in their homes would not only reduce the social instability arising from forced moves; it would ensure bank owners a revenue stream during the resale process and potentially

MONEY PUT TOWARDS KEEPING UP THE HOUSING STOCK WOULD BE MONEY SPENT WISELY.

curtail the kind of vandalism and disorder that results from vacancy. But a number of practical and legal barriers make this strategy difficult. To begin with, banks simply do not have an administrative infrastructure in place that would allow them to track and receive rent payments. In addition, housing economists offer divergent opinions on the effect of occupancy on salability of a home. But perhaps the most critical barrier to a bank-owned rental model is a federal statutory limitation on the power of national banks to serve as long-term residential landlords.

But Daniel Alpert, Managing Director of Westwood Capital, has developed a rent-to-own construct that works within the boundaries of federal law. His proposal, which he calls *The Freedom Recovery Plan for Distressed Borrowers and Impaired Lenders*, works within the existing legal framework by placing a five-year sunset on the rental term, under the theory that five years and certain inducements should give homeowners sufficient time to achieve financial stability.⁶⁸ In addition, the Plan calls for regulatory amendments to permit banking institutions to hold properties for investment purposes.⁶⁹

In a recent interview with the *New York Times*, Alpert admitted that the plan has a bit of a bilateral "ouch" factor, in the sense that homeowners would cede title at least for the short term and lenders would recoup roughly 60% to 70% of a healthy mortgage for the period of the Recovery Lease. Dut, Alpert says, the strength of the proposal is its realism: the plan "...admits the truth: the homeowner doesn't have equity, and the lender has taken a loss. They should

exchange interest, but not in a way that throws the homeowner out in the street."⁷¹ The plan seeks to address "the massive disruption of the economy and the social dislocation" that follows a wave of foreclosures. It also seeks to break the cycle by which foreclosures cause other property values to drop below the value of their mortgages, either by flooding the market with for-sale properties or physically blighting neighborhoods.⁷²

Although the Plan requires legislative cooperation on a national level, it would have significant and immediate benefits locally. Single-family homeowners at risk of foreclosure would be able to stave off the loss of their homes by entering a contractual arrangement with their lending institution. The arrangement would 1) buy the homeowner and the larger housing market a five-year window in which to recover stability; and 2) avoid the kind of cancerous vacancies that have destabilized Eastern Queens. The strength of the plan is its realistic vision of the economic forces at play in the foreclosure process. Although it requires both homeowners and lending institutions to make short-term concessions, it presents an opportunity to maximize mutual longterm benefit.

COLLABORATION TO REFURBISH AND RESELL HOMES

With an unprecedented number of REOs in their portfolios, banks acknowledge that they are not adequately maintaining REO properties. Heidi Coppola, Director of Mortgage Finance for Citi

ALTHOUGH IT REQUIRES BOTH
HOMEOWNERS AND LENDING INSTITUTIONS
TO MAKE SHORT-TERM CONCESSIONS, IT
PRESENTS AN OPPORTUNITY TO MAXIMIZE
MUTUAL LONG-TERM BENEFIT.

Markets and Finance, says that CitiBank has not yet found the appropriate business model for maintaining them. Because New York has one of the longest foreclosure processes in the country, by the time banks take title on a foreclosed home, the home has frequently been vacant for many months, or, in some cases, more than a year. Sometimes a lender discovers that the foreclosed-upon owner has sabotaged the

home, either by vandalizing the property or by removing critical features, such as cabinets and kitchen appliances. In addition, weather damage, to a home's exterior or interior in the event of burst pipes, may be particularly disastrous if the lender does not discover the damage until the next regular site visit.⁷³

Sarah Gerecke of NHS NYC reports that the long-term solution to neighborhood vacancies—namely purchase, rehabilitation and resale by a responsible housing nonprofit—boils down to money. If NHS cannot afford to purchase a foreclosed home, bring it up to code, and resell it at an affordable price, the project cannot go forward.⁷⁴ In light of this fact, Cathy Mickens of NHS Jamaica suggests that NHS Jamaica partner financially with organizations that share their mission to restore affordable homes to the market.⁷⁵

The funds provided to New York City by the Housing and Economic Recovery Act will encourage the cooperation and resource-sharing necessary to enable projects such as these. CNYCN Executive Director Michael Hickey expressed a willingness to pledge a substantial portion of the funds specifically toward REO projects, and Restored Homes, an organization that works directly with community groups to develop homes, and has taken on the task of mobilizing and unifying local rehabilitation efforts for maximum efficiency and impact. ⁷⁶ Collaborations such as these will diminish some funding concerns and help address the deterioration of struggling New York City neighborhoods.

CONCLUSION

Over a few short years, tens of thousands of local homeowners have lost their homes, and scores of New York neighborhoods have seen the depression made manifest in boarded-up, deteriorating homes. While New York can be thankful for a stronger housing market than most parts of the country enjoy, a handful of city neighborhoods—particularly Jamaica and South Ozone Park in Queens—have weathered tremendous destabilization, and seen their hopes of local economic vitality plummet from a recent peak of excitement and promise.

This crisis presents an unexpected opportunity, in Queens and in communities across the country, to think creatively about developing incentives for long-term, sustainable local investment by neighborhood

groups, lending institutions and government agencies. By implementing the strategic approaches outlined above, government and community leaders in Eastern Queens can begin the work of restoring their neighborhoods to their pre-2006 visions of cultural richness and economic momentum.

NOTES

- Interview with Karyn Peterson, District Manager, & Elizabeth Braton, Chair, Queens Community Board 10 (Oct. 6, 2008).
- Interview with Yvonne Reddick, District Manager, Queens Community Board 12 (Oct. 9, 2008).
- Furman Center for Real Estate & Public Policy, Housing Policy in New York City: A Brief History (Working Paper No. 06-01), available at: http://furmancenter.org/files/AHistoryofHousingPolicycombined0601_00 0.pdf.
- Interview with Cathy Mickens, Executive Director, Neighborhood Housing Services of Jamaica, and Staff in Jamaica, N.Y. (Oct. 16, 2008).
- Telephone Interview with Sarah Gerecke, Executive Director, Neighborhood Housing Services of New York City (Oct. 14, 2008).
- Raymond Hernandez, "Jamaica: Prosperous Isle in Queens," The New York Times, June 27, 1993.
- PlanNYC Planning Information Portal, Jamaica Queens Redevelopment and Rezoning, http://www.plannyc.org/project-72-Jamaica,-Queens-Development-and-Rezoning (last visited Nov. 9, 2008).
- Jess Wisloski, Robert Gearty, Benjamin Lesser, & Greg Smith, "The Tragic Toll of Housing Nightmare," New York Daily News N.Y., June 28, 2008.
- Jess Wisloski, "Foreclosures in Jamaica Now Home to Squatters, Druggies

 Making Ghost Town," New York Daily News, Feb. 17, 2008.
- 10. Because of the strength of its residential real estate market, Manhattan has been relatively unscathed by the skyrocketing foreclosure rates seen in other New York City boroughs and American cities, as the subprime crisis leaves its mark. But in September 2008, The New York Times reported the first signs of the encroachment of foreclosure on what was thought to be a pocket of foreclosure immunity: missed payments by condominium owners, prophylactic sales, and consultation of foreclosure prevention services. See Christine Haughney, "Foreclosure Makes its Move on Manhattan," *The New York Times*, Sept. 7, 2008. The number of foreclosure filings for Manhattan properties jumped from 52 in July 2007 to 93 in July 2008 - an increase of 78%. Although the overall numbers are still small compared to Queens (one foreclosure per 50,000 homes in Manhattan versus one per 4,300 homes in Queens), the increase in Manhattan foreclosures signifies a troubled economy. See also, J.W. Elphinstone, "After Foreclosures, Crime Moves In," Associated Press, Nov. 18, 2007.
- 11. Christine Haughney, "Foreclosure Makes its Move on Manhattan," op. cit.
- 12. REO data is owned exclusively and privately by lending institutions. Industry leaders agree that the best source of information comes from LoanPerformance's mortgage securities database, which gathers data from the ten largest servicers and aggregates the data by geographic indicators; but because the data are proprietary, access to LoanPerformance is prohibitively expensive for academic, nonprofit, or public users. Although the Federal Reserve Bank made some state, city, and zip code data available to the public through December 2007, beginning in 2008 the Federal Reserve has made available to the public only data broken down by state. Recognizing these limitations, additional data was obtained from PropertyShark.com and RealtyTrac. PropertyShark.com aggregates data from government records and legal notices for informational purposes. RealtyTrac collects and aggregates foreclosure data from nearly 2,500 counties, covering more than 94% of US households.
- Tom Acitelli, "Who Will Buy All Those Foreclosed Queens Homes?", New York Observer, Sept. 30, 2008.
- PropertyShark.com, Foreclosure Report Q3 2008 (2008), http://www.propertyshark.com/mason/components/blogcenter/pdf_report.mas?id=28.
- 15. Ibid.
- 16. Ibid.
- Data derived from www.RealtyTrac.com and the NYC Department of City Planning MapPluto (The Primary Land Use Tax Lot Output), ed. 07C. For further information, see: http://www.nyc.gov/html/dcp/html/bytes/mapplutosample.shtml.
- 18. Interview with Cathy Mickens, op. cit.
- 19. Interview with Karyn Peterson & Elizabeth Braton, op. cit.

- Dan Immergluck & Geoff Smith, Woodstock Institute, "The Impact of Single Family Mortgage Foreclosures on Neighborhood Crime" (2005).
- Jess Wisloski, "Foreclosures in Jamaica Now Home to Squatters, Druggies – Making Ghost Town," op. cit.
- 22. Manny Fernandez, "Door to Door, Foreclosure Knocks Here," *The New York Times*, Oct. 18, 2008.
- Telephone Interview with the Office of State Sen. Jeffrey Klein (Oct. 14, 2008)
- 24. Ibid.
- 25. Interview with Cathy Mickens, op. cit.
- Press Release, Furman Center for Real Estate & Urban Policy, New Analysis of NYC Foreclosure Data Reveals 15,000 Renter Households Living in Buildings that Entered Foreclosure in 2007 (Apr. 14, 2008) (available at: http://furmancenter.nyu.edu/documents/FurmanRelease_RentersinForeclosure_7_14_2008.pdf).
- 27. Ibid.
- 28. Bob Erlenbush, Kelly O'Connor, Sherrie Downing, & Sue Watlov Phillips, National Coalition for the Homeless, Foreclosure to Homelessness: The Forgotten Victims of the Subprime Crisis (2008), http://www.nationalhomeless.org/housing/foreclosure_report.pdf.
- 29 Ibid
- Margo Candelaria, Sarah Oberlander, & Maureen Black, "Housing and Health: Financial Crisis is Threatening Children's Well-Being," Baltimore Sun, Oct. 24, 2008.
- 31. Ibid.
- Stephanie Armour, "Foreclosures Financial Strains Take Toll on Kids," USA Today, July 9, 2008.
- 33. Office of Sen. Charles Schumer, Capital Access 2002: Lending Patterns in Black and White Neighborhoods Tell a Tale of Two Cities (2002), available at: http://schumer.senate.gov/SchumerWebsite/pressroom/special_reports/cap%20access%202002.pdf; and Manny Fernandez, "Racial Disparity Found Among New Yorkers with High-Rate Mortgages," The New York Times, Oct. 15, 2007.
- New York City Dep't of City Planning, New York City Census FactFinder, http://gis.nyc.gov/dcp/pa/address.jsp (last visited Nov. 16, 2008).
- 35. Ibid.
- 36. Furman Center for Real Estate & Urban Policy, Declining Credit & Growing Disparities: Key Findings from HMDA 2007 (2007), http://furmancenter.nyu.edu/documents/KeyFindingsfromHMDA2007 FurmanCenterReport.pdf.
- 37. Ibid.
- Erin Durkin, Minorities Hit Hard in Mortgage Crunch, New York Daily News, Oct. 28, 2008.
- 39. Dan Immergluck & Geoff Smith, The External Costs of Foreclosure: The Impact of Single-Family Mortgage Foreclosures on Property Values, 17 Housing Policy Debate No. 1 (2006). Either estimate is conservative, given that the Immergluck and Smith intentionally limit their study to single-family homes, excluding condominiums, rental properties and commercial buildings.
- 40. Ibid.
- 41. Interview with Yvonne Reddick, op. cit.
- 42. William Apgar & Mark Duda, "Collateral Damage: The Municipal Impact of Today's Mortgage Foreclosure Boom," Homeownership Preservation Foundation (May 2005).
- 43. Ibid.
- 44. Ibid.
- E-mail from Tyler Van Gundy, Forsyth Street Advisors, to Abigail Westbrook (Nov. 7, 2008).
- 46. Interview with Cathy Mickens, op. cit.

- Telephone Interview with Lisa Danzig, Deputy Director for Strategic Planning, New York City Dep't of Housing Preservation & Development (Sept. 29, 2008).
- 48. N.Y.C. Admin. Code § 27-2091 (2008).
- 49. Telephone Interview with Sarah Gerecke, op. cit.
- 50. Interview with Karyn Peterson & Elizabeth Braton, op. cit.
- John Leland, "Swift Steps Help Avoid Foreclosures in Baltimore," *The New York Times*, March 26, 2008.
- 52. Ibid.
- 53. Ibid.
- 54. Ibid.
- 55. Ibid.
- RealtyTrac, Foreclosure Terminology, http://www.realtytrac.com/education/foreclosureTerms.html.
- 57. Ibid
- 58. Telephone Interview with Audrey Waysse, Special Consultant, Center for New York City Neighborhoods (Nov. 7, 2008).
- 59 Ibid
- 60. Telephone Interview with Stephanie Basco-Ruggiero, Consultant, Neighborhood Housing Services (Nov. 7, 2008).
- 61. Interview with Karyn Peterson & Elizabeth Braton, op. cit.
- Mayor's Office of Operations, Street Condition Observation Unit, http://www.nyc.gov/html/ops/html/scout/about.shtml (last visited Nov. 16, 2008).
- 63. Ibid.
- Telephone Interview with Joe Courtien, Chief of Code Enforcement Inspectors, Dep't of Housing & Preservation Development (Nov. 11, 2008)
- Interview with Sarah Gerecke, Chief Executive Director, Neighborhood Housing Services of New York City, in New York, N.Y. (Oct. 15, 2008).
- 66. Telephone Interview with Heidi Coppola, Director, Mortgage Finanace, Citi Markets & Banking (Oct. 28, 2008).
- 67. 12 U.S.C. § 29 (2008).
- 68. Daniel Alpert, The Freedom Recovery Plan for Distressed Borrowers and Impaired Lenders, Westwood Capital, LLC (2008), http://www.westwoodcapital.com/opinion/images/stories/articles_oct/the _freedom_recovery_plan.pdf.
- 69. Ibid.
- 70. Joe Nocera, "Shouldn't We Rescue Housing?," *The New York Times*, Oct. 18, 2008.
- 71. Ibid.
- 72. Ibid.
- 73. Ibid.
- 74. Telephone Interview with Sarah Gerecke, op. cit.
- 75. Interview with Cathy Mickens, op. cit.
- 76. Telephone Interview with Audrey Waysse, op. cit.

MATERNAL MORTALITY: A COMPARATIVE STUDY BETWEEN HONDURAS AND PERU

NOK CHHUN, JOAN COMBELLICK, MONEESHA KAMANI, LALITHA RAMANATHAPURAM, AND VANESA RIOS

ABSTRACT

onduras and Peru share many demographic, socioeconomic, and healthcare characteristics; yet Honduras leads its region with a 40% reduction in maternal mortality in less than a decade, while Peru has one of the highest maternal mortality ratios in South America, nearly quadruple that of Honduras. Why and how does the path to improved reproductive healthcare for women differ in these two nations? A comparative study provides insights into healthcare system development and program implementation in other countries and regions. Accurate census data, political prioritization of the problem, sustained commitment to accessible healthcare, and accountability in health systems development all have a role to play.

INTRODUCTION

The provision of adequate reproductive healthcare is a complex challenge affected by broader social problems such as poverty, illiteracy, and the status of women. With respect to maternal health, challenges also include a lack of evidence-based programming, multi-sectoral initiatives that are complicated and expensive to maintain, unclear leadership, and funding rivalries.¹

To fully assess the state of maternal health, any step forward or backward deserves close attention. First, it is important to understand which data most clearly represent maternal morbidity and mortality. Second, it is necessary to identify the context of how maternal health fits into the national health profile and healthcare delivery system. Third, the analysis should examine what combination of governmental programming, development assistance, and institutionalization of the cause has led to effective healthcare policy or lack thereof. Finally, how can those lessons be applied elsewhere? Honduras and Peru provide opportunities for an insightful comparison because they share similar levels of poverty, literacy, life expectancy, and births attended by skilled personnel; yet they differ significantly in maternal mortality ratios. Between 1990 and 1997, Honduras reduced the number of deaths due to complications of pregnancy and childbirth by 40%, one of the largest reductions ever made in a developing country in less than a decade.2 Peru, on the other hand, a country with a higher Human Development Index,³ struggles with a maternal mortality rate that is nearly four times as high as Honduras (Table 1). By comparing Honduras and Peru, the authors can shed light on factors that improve the health and well-being of women and their families.

COLLECTION STRATEGIES, AND A
DISAGREEMENT OVER THE SIGNIFICANCE
OF FINDINGS HAVE LEFT WELL-INTENTIONED
GOVERNMENTS AND DONORS WITHOUT THE
TOOLS NEEDED TO IMPLEMENT EFFECTIVE
HEALTHCARE INTERVENTIONS.

MATERNAL MORTALITY

The global effort to improve the health of women has been hindered by an ongoing lack of consensus regarding how maternal mortality is defined and documented. Incomplete data, diverse collection strategies, and a disagreement over the significance of findings have left well-intentioned governments and donors without the tools needed to implement effective healthcare interventions. In this confusion, the sustained and broad-based commitment required to improve maternal health has often been bypassed as attention and resources focus on more targeted, results-oriented health crises, such as HIV, tuberculosis, and malaria. Consequently, the death of a pregnant woman—widely regarded as an extremely rare and largely preventable in most developed countries—becomes an all too frequent and largely invisible event in most developing countries.

Different definitions of maternal mortality have been applied in different situations when such definitions may not capture all the causes or points in time in which maternal mortality might occur. Research shows that the majority of maternal deaths occur in the interval between the third trimester and the first post-partum week with hemorrhage, infection, and hypertensive diseases posing the greatest threats.4 However, the list of potential life-threatening complications is long and includes spontaneous abortion, septic abortion, obstructed labor, ruptured uterus, placenta previa, placental abruption, embolism, and indirect factors such as suicide and intimate partner violence. Pre-existing diseases that complicate pregnancy—HIV, tuberculosis, and malaria, for example—also confuse the diagnosis of pregnancy-related death. In addition, many deaths caused by pregnancy are never reported as such because of the inability to detect early pregnancies or social concerns about abortion. Additionally, maternal death statistics do not account for "near miss" events like severe anemia and fistula that can lead to compromised health and reduced life span.

Various indicators used in reporting maternal death require a centralized tracking system that is capable of documenting each death and correctly classifying the causal factor. However, in most developing countries, accurate census data do not exist: women die at home unattended, healthcare facilities lack record-keeping capability or a system of mandated reporting, and governments have incomplete death registries. These

problems are intensified in settings where conflict, famine, disease, or poverty prevails.

Several survey methods are used in lieu of comprehensive death registries, such as interviewing siblings regarding the death of sisters, conducting household surveys regarding deaths of women during reproductive years, and conducting verbal autopsies with questions designed to evaluate the cause and timing of death in relation to pregnancy. However, these surveys may be limited by under-reporting, recall bias, and an emphasis on historical instead of current data.5 Furthermore, these methods are expensive and, due to the relative paucity of maternal deaths in a country's entire population, require large sample sizes in order to provide valid statistical information.⁶ Because different countries have employed different techniques with varying degrees of success, comparisons between countries and even across time in the same country have limited validity.⁷

HONDURAS AND PERU: GENERAL FACTS

Honduras is a geographically small country (43,278 square miles) located at the isthmus of Central America, consisting mostly of mountains in the interior and narrow coastal plains. The population is approximately 7 million and the maternal mortality ratio is 110 per 100,000 live births.8 Although there have been frequent changes of government, the country has not suffered major political instability during the last 15 years.9 In contrast, Peru is the third largest country in Latin America (496,222 square miles) located in the western part of South America. The country has a varied geographical terrain consisting of the western coastal plain, the high and rugged Andes in the center, and the eastern lowland jungle of the Amazon basin. 10 The population is approximately 26 million and the maternal mortality ratio is 410 per 100,000 live births.¹¹ Peru has been plagued by political instability and insurgency over the past 25 years.¹²

The convergent and divergent traits of Peru and Honduras provide insight into the differences in the maternal mortality index between the two countries. According to data from the World Health Organization (WHO) and Pan American Health Organization (PAHO), Honduras and Peru have many demographic, socioeconomic, and healthcare characteristics in common. They have comparable

annual population growth and fertility rates (Table 1) and share similar levels of total life expectancy, female life expectancy, total literacy, female literacy, and primary school enrollment for both males and females (Table 2). All of these factors impact maternal health. The Gini index for Honduras and Peru are comparable at 53.8% and 54.6%, respectively (Table 3). The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from an equal distribution. The levels of medical resources are similar (i.e., prenatal care and number of hospital beds), but Peru has a slightly higher percentage of births attended by skilled health personnel, and a higher physician ratio, while Honduras has a higher nurse ratio (Table 1). In terms of population health indictors, Honduras has a slightly higher neonatal, infant, and under-5 mortality rate than Peru (Table 1).

With most demographic, socioeconomic, and healthcare indicators the same, why does Honduras have a substantially lower maternal mortality ratio? Although a higher proportion of the population in Peru lives in urban areas (73% compared to 47% in Honduras, Table 2), 65% of urban Peruvians live in slums as opposed to 25% of urban Hondurans living in slums. 13 Peru also has a much larger indigenous population (20% of the population) than Honduras (7% of the population). About 80% of indigenous Peruvians live in poverty and face barriers accessing healthcare, education, and sanitation. 14, 15 Overall, people in Honduras and Peru have similar access to potable water and sanitation facilities, but the rural population in Honduras has a higher level of access to these services (Table 3). In terms of health expenditure, Honduras spends more on health than Peru as a percent of GDP (7.2 vs. 4.1), with higher government or public expenditure and lower private expenditure (Table 1). The public and private expenditures are reversed in Peru, which may indicate a correlation between government expenditure on health and citizen access to health services.

HEALTH SYSTEM OVERVIEW: HONDURAS AND PERU

The Honduran health system is composed of both public and private sectors. The public sector is divided primarily between the Ministry of Public Health (covering 60% of the population) and the

Table 1: Overall Status of Healthcare Systems		
Indicators	Honduras	Peru
Maternal mortality ratio (per 100,000 live births): 2000 ^a	110.0	410.0
(Lower estimate-Upper estimate)	(54-220)	(230-590)
Number of Maternal Deaths: 2000 ^b	220	2500
Proportion of maternal deaths (%) [Percentage of deaths to women of reproductive age (15-49) that are maternal deaths]: 2000 ^b		20
Life-time risk of maternal death (1in) (Estimated risk of a woman dying from pregnancy or childbirth during her lifetime): 2000 ^b	190	73
Neonatal mortality rate (per 1,000 live births): 2004 ^a	17.0	11.0
Infant mortality rate (per 1,000 live births): 2005 ^a	31.0	23.0
Under 5 mortality (per 1,000 live births): 2006	42.6	31.1
Healthcare infrastructure		
Prenatal care by trained personnel (%):		
Honduras: 2001 – 2005 value; Peru: 2004 value	91.7	91.1
Births attended by skilled health personnel (%):		
Honduras: 2001 – 2005 value; Peru: 2004 value	66.9	71.1
Births attended by skilled health personnel (%) rural: 2000 ^a		25.3
Births attended by skilled health personnel (%) urban: 2000 ^a		84.6
Births attended by skilled health personnel ratio urban-rural: 2000 ^a		3.3
Physicians ratio (per 10,000 population):		
Honduras: 2000ª value; Peru: 2005 value	5.7	10.0
Nurses ratio (per 10,000 population)	12.9	9.0
Midwives ratio (per 1,000 population): 2000 ^a	0.03	
Number of outpatient care facilities: 2002	2,104.0	7,822.0
Outpatient healthcare visits ratio (per 1,000 population): 2003	1,445.4	2,606.1
Hospital beds ratio (per 1,000 population):		
Honduras: 2002 value; Peru: 2004 value	1.0	0.9
Prevalence of contraceptive methods in women (%): 2000-2006	43.0	71.0
Healthcare spending		
Total expenditure on health as % of GDP: 2004 ^a	7.2	4.1
Gov't. expenditure on health as % total expenditure on health: 2004 ^a	54.9	46.9
Private expenditure on health as % total expenditure on health: 2004a	45.1	53.1
External resources for health as % total expenditure on health: 2004a	8.7	1.3
Out-of-pocket expenditure as % of private expenditure on health: 2004 ^a	84.3	79.2

Source: Pan American Health Organization, Health Analysis and Statistics Unit. Regional Core Health Data Initiative; Technical Health Information System. "Health Situation in the Americas: Basic Indicators 2007," Washington DC, 2007.

*Source: World Health Organization Statistics Information System (WHOSIS). World Health Statistics 2007. Core Health Indicators (http://www.who.int/whosis/database/core/core_select.cfm?strISO3_select=USA&strIndicator_select=TotEOHPctOfGDP&intYear_select=latest&language=english).

^bSource: WHO Reproductive Health Database(http://www.who.int/reproductive-health/global_monitoring/RHRxmls/RHRmainpage.htm).

Honduran Social Security Institute (10% to 12%). Private services cover 10% of the population. The Ministry of Public Health is organized into nine health regions and 42 areas. In 1996 the Ministry of Public Health assumed a progressive stance by establishing access to health services as the central priority of healthcare reform. From 1999 through 2001 this priority was further articulated to include seven guiding principles: universality, solidarity, equity, efficiency, participation, quality, and transparency. 16 Healthcare in Honduras is organized around a system of tiered services including area, regional, and national hospitals. The majority of these facilities are administered through the public sector (Table 1) with a large proportion of medical services available in urban areas. Penetration of medical services into rural areas is more limited. Significant support from the United States and USAID in the 1980s allowed Honduras to devote financial attention to domestic issues such as the development of healthcare infrastructure under the auspices of the Ministry of Public Health. In 1987, 11.7% of the national budget was dedicated to health, a considerably higher proportion than other countries in the region.¹⁷ This has progressively increased over the years with 15% dedicated to health in 2006.

HEALTH SYSTEM OVERVIEW: PERU

In contrast, the health system in Peru is highly segmented with limited public sector coverage and high private expenditures. 18, 19 In order to expand the reach of healthcare, the Peruvian government's Ministry of Health (MINSA) introduced the Seguro Integral de Salud or SIS ("Health Insurance, sure for all") in 2002. The SIS is a government-subsidized health insurance scheme designed to enable people in Peru's poverty-stricken regions without health insurance to have coverage for free or for a small monthly fee based on participant's socio-economic status.²⁰ A part of this scheme focuses on pregnant women and includes prenatal monitoring, attention during normal and high-risk deliveries, postnatal care, attention to other health problems, emergency transfers, and funeral costs. Individuals who wish to enroll in SIS are required to possess a national identity document, pay a subsidized fee of one nuevo sol (US\$0.30), and fill out a socioeconomic evaluation sheet. In addition, government officials conduct home visits to verify enrollment information. The lack of national identity documents for almost 3 million people (not issued by the government because of high costs)²¹ and the lengthy verification procedures are major barriers to SIS participation. Furthermore, although SIS is a subsidized scheme,

Table 2: Demographic Indicators				
Indicators	Honduras	Peru		
Total population (in thousands): 2007	7,106	27,903		
Proportion of urban population (%): 2007	47.4	73.0		
Annual population growth rate (%): 2007	1.9	1.2		
Total fertility rate (child/woman): 2007	3.3	2.5		
Life expectancy at birth (in years): 2007	70.2	71.4		
Female life expectancy at birth (in years): 2007	73.7	74.0		

Source: Pan American Health Organization, Health Analysis and Statistics Unit. Regional Core Health Data Initiative; Technical Health Information System. "Health Situation in the Americas: Basic Indicators 2007," Washington DC, 2007.

*Source: World Health Organization Statistics Information System (WHOSIS). World Health Statistics 2007. Core Health Indicators (http://www.who.int/whosis/database/core/core_select.cfm?strISO3_select=USA&strIndicator_select=TotEOHPctOfGDP&intYear_select=latest&language=english).

^bSource: WHO Reproductive Health Database(http://www.who.int/reproductive-health/global_monitoring/RHRxmls/RHRmainpage.htm).

Table 3: Socioeconomic Indicators				
Indicators	Honduras	Peru		
Gross national income (US \$ per capita, ppp value): 2005	2,900	5,830		
Gross domestic product (GDP) (US \$ per capita ppp value): 2003	2,665	5,260		
Annual GDP growth (%): 2004 - 2005	4.0	6.4		
Population living below the poverty line	14.9	10.5		
(% living on <us \$1="" -="" 1998="" 2004<="" day):="" per="" td=""><td></td><td></td></us>				
Gini index (%)¶	53.8	54.6		
Proportion of population (%) using: (2004)				
Improved drinking water sources (total)	87.0	83.0		
Improved drinking water sources (urban)	95.0	89.0		
Improved drinking water sources (rural)	81.0	65.0		
Improved sanitation facilities (total)	69.0	63.0		
Improved sanitation facilities (urban)	87.0	74.0		
Improved sanitation facilities (rural)	54.0	32.0		

Source: Pan American Health Organization, Health Analysis and Statistics Unit. Regional Core Health Data Initiative; Technical Health Information System. "Health Situation in the Americas: Basic Indicators 2007," Washington DC, 2007.

*Source: World Health Organization Statistics Information System (WHOSIS). World Health Statistics 2007. Core Health Indicators (http://www.who.int/whosis/database/core/core_select.cfm?strISO3_select=USA&strIndicator_select=TotEOHPctOfGDP&intYear_select=latest&language=english).

^bSource: WHO Reproductive Health Database(http://www.who.int/reproductive-health/global_monitoring/RHRxmls/RHRmainpage.htm).

additional service fees for drugs and other health services reduce healthcare access for individuals who cannot afford to pay. Although SIS currently serves 6.2 million people (approximately 24% of the population) with 67% of participants from the two lowest income quintiles, 25% of the country still does not have access to primary healthcare services.

Stark disparities exist in even the provision of healthcare services: Lima, the capital, has 22 doctors, 11 nurses, and 3 obstetricians for every 10,000 people, compared with remote areas such as Huancavelica, which have less than half the number of health professionals per 10,000 residents.²²

MATERNAL MORTALITY: HONDURAS

The Honduran response to reducing maternal mortality is frequently cited as a model for success in developing countries. Despite being a poor nation with limited resources, the maternal mortality ratio

THE HONDURAN RESPONSE TO REDUCING MATERNAL MORTALITY IS FREQUENTLY CITED AS A MODEL FOR SUCCESS IN DEVELOPING COUNTRIES.

dropped by 40% in 7 years, from 182 deaths per 100,000 in 1990, to 108 in 1997.²³ Evaluation of the Honduran experience reveals the importance of clear data and a multi-faceted approach to maternal healthcare, beginning with strong institutional prioritization of the issue.

In the 1980s and 1990s, Honduran government participated extensively in the global Safe Motherhood Initiatives launched at the Safe Motherhood Conference in Nairobi, Kenya in 1987.

The conference launched a global safe motherhood movement, which sought to address the near-silent tragedy of women dying during pregnancy and childbirth, and solidified an international safe motherhood network that linked safe motherhood advocates across the globe with government bodies and non-governmental organizations.

Prior to 1990, Honduras collected maternal death data only as reported by hospitals, which identified a national maternal mortality ratio of a remarkably low 50 per 100,000. However, in 1990, Reproductive Age Mortality Surveys (RAMOS), the gold standard in maternal mortality investigations, which examine every maternal death in a country over the course of a year and generate statistics for the entire population (instead of sample-based estimates with wide confidence intervals), revealed a maternal mortality ratio—182 per 100,000—to be nearly four times higher than originally thought.²⁴ The shocking news stimulated the organization of strong institutional support for the issue both within the Honduran government and from non-governmental and bilateral donors.

Throughout the 1990s, Honduras maintained an ongoing commitment to improving maternity care. Appointing one individual to be the head of the newly formed maternal and child health division as part of the Ministry of Health was key in focusing attention and resources on the problem. The Honduran approach was based on three primary activities: increasing skilled attendance at births, increasing availability of services, and improving identification and referral of high-risk cases. Regions with the highest maternal mortality were targeted to receive the most intensive interventions (Table 4). Individual accountability coupled with a high degree of productive collaboration between governmental and non-governmental bodies proved to be a successful combination.25

MATERNAL MORTALITY: PERU

In contrast, the maternal mortality ratio in Peru has remained high in 2007—410 out of 100,000 women die during child birth, or one woman every eight hours. ²⁶ This number is only surpassed by three of the poorest nations in the Americas—Haiti, Guatemala, and Bolivia. Most frequent causes of maternal death are preventable, such as septic abortion, preeclampsia, puerperal infections and hemorrhage.

ACCESS TO HEALTHCARE SERVICES
IN PERU IS ALSO DEEPLY IMPACTED BY ITS
COMPLEX GEOGRAPHICAL TERRAIN—THE
RESULT IS THAT WOMEN LIVING IN REMOTE
AREAS DO NOT HAVE EASY ACCESS TO
BASIC HEALTHCARE SERVICES.

Induced abortions are illegal and clandestine in Peru and patients risk severe complications because of their inability to pay for health services.²⁷ In rural areas, just over 21% of women give birth in health centers²⁸ and only 25% of births are attended by skilled personnel, compared with 84% in urban areas (Table 1). According to WHO and PAHO, indigenous populations and people who are monolingual in an indigenous language face barriers to health access.²⁹ Access to healthcare services in Peru is also deeply impacted by its complex geographical terrain—the result is that women living in remote areas do not have easy access to basic healthcare services.

DEVELOPMENT ASSISTANCE AND HEALTHCARE FINANCING IN HONDURAS

Development assistance for healthcare in Honduras has come from a broad spectrum of governmental, bilateral, and non-governmental sources. In the case of reproductive healthcare, Honduras was able to marshal and coordinate these resources toward infrastructure development and service delivery. Studies of Honduras' success of reducing maternal mortality focused on the collaborative relationship between the Honduran government and donor agencies. The total Official Development Assistance (ODA) to Honduras in 2004 was US \$642 million, and ODA as a percentage of recipient GNI was 9%.30 The UNFPA, PAHO, and the World Bank provided financing and technical assistance for the safe motherhood initiatives in the early 1990s.31,32 USAID provided US\$57.3 million to the health sector between 1988-2000, with a large portion directed toward maternal mortality reduction.³³ UNFPA approved about half a million dollars for Honduras (1991-1995), which included a sub-program on reproductive health and the health of mothers.³⁴ The Honduran office of PAHO offered technical expertise and received financial backing from the Netherlands and other donors.³⁵ The consensus

among donors allowed multi-faceted and flexible interventions to be adapted to the needs of different regions.³⁶ Furthermore, interventions were guided by reliable data from RAMOS. The study provided Honduras with a mechanism to concretely define the problem and an effective means to evaluate interventions.

Development assistance to Honduras has also collaboratively supported innovative programs such as monetary incentives to increase healthcare utilization,³⁷ the institution of community drug funds,³⁸ and a community-based childhood nutrition program.³⁹ Though Hurricane Mitch in 1998 had a devastating economic and health impact on Honduras, the aftermath also brought a wave of increased aid from donor sources. In 2004 total expenditure on health was 7.2% of GDP. Government expenditure on health as a percentage of total health expenditure was 54.9%. External resources comprised 8.7% of total expenditure on health.

DEVELOPMENT ASSISTANCE AND HEALTHCARE FINANCING IN PERU

Despite the inflow of development assistance, maternal mortality in Peru remains high. Total ODA to Peru in 2004 was US \$487 million, and ODA inflow as a percentage of recipient GNI was 1%.40 In contrast to Honduras, more of Peru's development assistance go to programs for tuberculosis and HIV instead of to improving health infrastructure and primary healthcare. USAID has been one of Peru's largest donors, providing 40% of total external assistance. Loans from the Inter-American Development Bank and the World Bank represent approximately 11% and 9% of total aid received respectively.41 Part of the USAID/Peru health programs focus on strengthening the institutional capacity of the Ministry of Health and professional organizations for doctors, nurses, and midwives.⁴² Likewise, USAID funding (US\$7 million in 2001-2002) supported female education, empowerment in reproductive health, and programs for the indigenous population.⁴³ The USAID/Peru budget for health in 2007 and 2008 was US\$12.7 million and US\$12.1 million respectively and focused on decentralization and health policy reform. The proposed USAID/Peru budget for health in 2009 is US\$11.4 million. In November 2006, the Government of Japan and the United Nations decided to extend assistance of US\$2 million, through the Trust Fund to the "Human

Security for the Development of Women and Children in Peru" project to be implemented by the Office of the WHO, PAHO, UNICEF, and UNFPA in the Peru. 44

In terms of public expenditure on health, Peru invested only 4.1% of its GDP on health in 2004, of which government expenditure was 46% (Table 1). In March 2007, a "health care for all" decree was passed by the Peruvian government to restructure the current Integral Health Insurance (SIS) and to combine Peru's healthcare systems: the public hospitals (MINSA), the Social Health Insurance hospitals (Es Salud), and the hospitals of the Armed Forces and the National Police. The decree proposed to pave way for universal access to Peru's healthcare system by the end of 2007. The SIS modifications would facilitate insurance coverage for Peruvians, regardless of employment, insurance, or civilian status. As of December 2008, the World Bank and the Inter American Development Bank have approved loans of US\$15 million to support the second phase of the government's health sector reform program for universal health coverage, with the government providing an additional US\$132.4 million.45

CONCLUSION

Developing nations still face challenges in reducing maternal mortality; however, short-term advances in Honduras show potential for progress. The key to improving maternal health seems to be the level of political priority given to the cause, accountability in programming, and the ability to martial diverse resources. Additionally, the role of reliable data can not be underplayed. In Honduras, safe motherhood became an important goal between 1990 and 1997. As a result of concerted efforts directed toward reducing maternal mortality, the country experienced a dramatic decline in maternal mortality. In Peru, however, maternal health failed to improve due to the lack of prioritization, sustained leadership, and political support. Despite Honduras' success in the 1990s, progress has flat-lined since 1997. Further research should be conducted to evaluate why this progress has not continued. A comprehensive study of maternal mortality carried out at the country level could be effective in defining the path to sustained reduction in maternal mortality.

NOTES

- AM Starrs, "Safe motherhood initiative: 20 years and counting," *Lancet* 368 no. 9542 (2006): 1130-2.
- Jeremy Shiffman, Cynthia Stanton, and Ana Patricia Salazar, "The emergence of political priority for safe motherhood in Honduras," *Health Policy and Planning* 19 no 6 (2004): 380-90.
- United Nations Development Programme, "Beyond scarcity: Power, poverty and the global water crisis," *Human Development Report* (New York: Palgrave MacMillan, 2006).
- Carine Ronsmans and Wendy J.Graham, "Maternal mortality: who, when, where, and why," *Lancet* 368 no. 9542 (2006): 1189-200.
- Kenneth Hill et al., "How should we measure maternal mortality in the developing world? A comparison of household deaths and sibling history approaches," *Bulletin of the World Health Organization* 84 no. 3 (2006): 173-80.
- 6. Wendy J. Graham, "Now or never: the case for measuring maternal mortality," *Lancet* 359 no. 9307 (2002): 701-4.
- Cynthia Stanton et al, "Every death counts: measurement of maternal mortality via a census," *Bulletin of the World Health Organization* 79 no. 7 (2001): 657-64.
- World Health Organization Statistics Information System (WHOSIS), World Health Statistics: Core Health Indicators. [cited November 10, 2007]; available from http://www.who.int/whosis/database/core/core_select.cfm?strISO3_select= USA&strIndicator_select=TotEOHPctOfGDP&intYear_select=latest&la nguage=english.
- CIA, The World Factbook [cited November 10, 2007]; available from https://www.cia.gov/library/publications/the-world-factbook/index.html.
- 10. Ibid.
- 11. WHOSIS.
- 12. CIA, The World Factbook.
- United Nations Development Programme (UNDP), "Achieving the Millennium Development Goals in Latin America and the Caribbean" (2004) [cited November 10, 2007]; available from http://www.undp.org/.
- 14. Economic Commission for Latin America and the Caribbean (ECLAC), "The Millenium Development Goals. A Latin American and Caribbean Perspective" (Santiago, Chile: United Nations Publications, 2005).
- Gillette Hall and Harry Patrinos, Indigenous Peoples, *Poverty and Human Development in Latin America: 1994-2004* (Washington, DC: Palgrave MacMillan, 2006).
- 16. ECLAC, op. cit.
- 17. Shiffman et al., op. cit.
- 18. ECLAC, op. cit.
- David Mansfield and Andrew Morris, "All for health and health for all: a study of basic health care in Peru," *British Medical Journal* 282 (1981): 1684-6.
- Ricardo Bitrán, Cecilia Má, and Gloria Ubill, "Geography, health status and health investments: An analysis of Peru" (Washington D.C.: Inter-American Development Bank, 2000).
- Amnesty International, "Peru: Poor and Excluded women—denial of the right to maternal and child health" (2006).
- 22. Ibid.
- 23. Shiffman et al.
- 24. Ibid.
- 25. Ibid.
- 26. WHOSIS, op. cit.
- Luis Vega, "The battle to reduce maternal deaths in Southern Lima" PLoS Medicine 3 no. 2 (2006): e16.
- 28. Amnesty International.
- Ministerio de Salud y Organización Panamericana de la Salud (MINSA-OPS), "Indicadores básicos: género, salud y desarrollo en el Perú Lima" (2005).
- 30. Organization for Economic Co-operation and Development (OECD), OECD World Factbook (2007).

- 3. Shiffman et al., op. cit.
- Jeremy Shiffman, "Generating political priority for maternal mortality reduction in 5 developing countries" *American Journal of Public Health* 97 no. 5 (2007): 796-803.
- 33. Ibid.
- 34. Shiffman et al., op. cit.
- 35. L. Martinez, "Evaluation of the regional plan of action for the reduction of maternal mortality in the Americas: Honduras 1994" cited in Jeremy Shiffman, Cynthia Stanton, and Ana Patricia Salazar, "The emergence of political priority for safe motherhood in Honduras," *Health Policy and Planning* 19 no 6 (2004).
- 36. Isabella Danel and Ada Rivera. "Honduras, 1990-1997," Reducing Maternal Mortality: Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, and Zimbabwe, ed. Marjorie A. Koblinsky (Washington, DC: World Bank Publications, 2003), 51-62.
- 37. Mansfield and Morris, op. cit.
- John L. Fiedler and Jonathan B. Wight, "Financing health care at the local level: the community drug funds of Honduras" *The International Journal of Health Planning and Management* 15, no. 4 (2000): 319-40.
- Marcia Griffiths and Judith S. McGuire, "A New Dimension for Health Reform-The Integrated Community Child Health Program in Honduras," Health System Innovations in Central America: Lessons and Impact of New Approaches, ed. Gerard M. La Fogia (Washington, DC: World Bank Publications 2005), 173-196.
- 40. OECD World Factbook, op. cit.
- U.S. Agency for International Development (USAID); available from http://www.usaid.gov/pe/.
- 42. Ibid.
- 43. Ibid.
- Ministry of Foreign Affairs of Japan (MOFA). "Assistance for 'Human Security for the Development of Women and Children in Peru' Project" (2006); [cited November 5, 2007]; available from http://www.mofa.go.jp/announce/announce/2006/11/1120-2.html.
- 45. See http://www.iadb.org/NEWS/ and http://web.worldbank.org.



AUTHOR BIOGRAPHIES

Mikelle Adgate is a graduate of Pace University with a degree in political science and women and gender studies. She is currently finishing her first year at Wagner as a master of public administration student with an international specialization. Her primary work has been with faith-based nonprofits, with a focus on girl empowerment and water access.

Kathleen Wetzel Apltauer earned a bachelor of arts in political science and human rights from Columbia University in May 2007. Finding it difficult to stop studying once she began, she will earn her master of public administration from Wagner in May 2009.

Suhaly Bautista, a master of public administration candidate with an international specialization, is interested in environmental policy, social justice, and sustainable development. She was a 2008 Manhattan Borough President Civic Leader of Tomorrow Public Policy Fellow and has worked with the United States Mission to the United Nations, AMIGOS de las Americas, and 100 Hispanic Women, Inc.

Nupur Chaudhury, a master of urban planning candidate with an international specialization, is interested in the intersection of urban planning and public health through the lens of water and sanitation. She has worked with the NYC Department of City Planning, the Manhattan Borough President's Office, the Clinton Foundation's Climate Initiative, and the InterAmerican Development Bank.

Nok Chhun, MS, is a junior research scientist in the Department of Epidemiology and Health Promotion at New York University College of Dentistry. She is currently enrolled in the masters in global public health program (epidemiology) at NYU.

Joan Combellick, CNM, MS, is employed by Hudson River Healthcare in a full-scope midwifery practice in Peekskill, New York. She is credentialed at Hudson Valley Hospital Center and Vassar Brothers Medical Center. She is currently enrolled in the masters in global public health program (epidemiology) at New York University.

Margaret Della is the Senior Program Manager at the Center for Nonprofit and Philanthropic Leadership under the Institute for Ethical Leadership at Rutgers Business School. She completed her master's of public administration at Wagner in December 2008.

Dea R. Denison received her bachelor of arts in fine arts and ecology at Marlboro College and her New York State Teaching Certification in visual arts at the State University of New York at Buffalo. She is a master's candidate in environmental conservation education at New York University's Steinhardt School of Culture, Education, and Human Development.

Katherine Denny is a master of public administration candidate and Mayor's Graduate Scholar, specializing in public policy analysis and cultural policy. Katherine serves as President of Wagner's Student Network Exploring Arts & Culture, and presented her research at the 34th Social Theory, Politics, and Arts conference. She is also Director of Special Projects at New York City's Department of Cultural Affairs.

Erica Hoyt Dixon is a master of public administration candidate specializing in finance. She holds a bachelor of arts in English from Harvard University. Erica has worked in the greater New York area since 2005 as a freelance development consultant. She provides grantwriting and other services to nonprofits in the fields of education, social services, and the arts.

Jennifer Farmwald is a master of public administration graduate with an international specialization. She is interested in issues of water and sanitation in the Andean region and has worked for New York University Fundraising and Charity: Water.

Corinne Gentilesco is a 2010 juris doctor candidate at the New York University School of Law. She holds a bachelor of arts from Wellesley College.

Amy Holmes holds a masters of public administration from Wagner. She is currently a Philanthropic Advisor at Rockefeller Philanthropy Advisors, a nonprofit organization dedicated to helping donors create thoughtful, effective philanthropy throughout the world.

Moneesha Kamani, MSc (microbiology), MS (molecular genetics), works in the field of preimplantation genetic diagnosis at Reproductive Medicine Associates in Morristown, New Jersey. She is also enrolled in the masters in global public health program (health policy and management) at New York University.

Victoria Lebron is a native New Yorker currently pursuing a masters of public administration at Wagner. She is also the Assistant Director of Development at Wagner where she supports fundraising efforts for both the Office of Development and the Research Center for Leadership in Action.

Tanti Liesman holds a bachelor's degree in technology and operations management from California State Polytechnic University in Pomona. She is a 2009 master of public administration candidate in the international health policy and management program at Wagner. Originally from Indonesia, Tanti worked at UNICEF Jakarta for Water & Sanitation and Health & Nutrition unit before coming to New York.

Annie Myers is a Gallatin Reynolds Scholar of Agriculture and Regional Food Systems. She is the intern of the New Amsterdam Market, and the author of *Thoughts on the Table*. Her previous reports include *Vitalizing the Vacant* and *The Choice to Farm*. Annie's work is focused upon the development of a strong, local food system in the Northeast.

Saumya Puthenveettil, a master of public administration candidate, graduated from Rensselaer Polytechnic Institute with a bachelor of science in mechanical engineering. Saumya has worked as a design engineer for General Electric Energy in Greenville, South Carolina, and Dagher Engineering in New York City.

Lynn Canzano Pyfer is a 2009 master of urban planning candidate, the current President of Wagner's International Public Service Association (IPSA), and the recipient of the Enid and Leonard Boxer Prize for outstanding leadership and academic achievement. Upon graduation, she plans to baby sit and remove her clothes for figure-drawing art classes.

Lalitha Ramanathapuram, PhD, is

currently enrolled in the masters in global public health program (health policy and management) at New York University. She is also working as a post-doctoral fellow in the Department of Oral and Maxillofacial Pathology at NYU.

Vanessa Rios DDS, Msc, is a dentist from Lima, Peru, and was enrolled in the masters in global public health program (oral health) at New York University.

Sara J. Rosen is program officer at JP Morgan Private Bank where she oversees the distribution of private philanthropic funds in the areas of workforce and community development, youth, human services, and animal welfare. Sara has been a grantmaker for more than five years. Her passion and part-time studies at Wagner have focused on the developing world.

Andrea M. Taylor is a master of public administration candidate specializing in public policy analysis. She holds a bachelor of journalism from the University of Missouri at Columbia. Andrea had an internship with former Senator Hillary Rodham Clinton.

Jordan Weitz works in corporate finance at the New York City Health and Hospitals Corporation (HHC). At Wagner, he is a 2009 master of public administration candidate focusing in healthcare financial management. Jordan's research interest in long-term care reform developed as a government relations committee member of the National Multiple Sclerosis (MS) Society.

Abigail Westbrook is a second-year student at the Wagner School for Public Service with a focus on public policy and finance. She works at Forsyth Street Advisors, primarily on the New York City Acquisition Fund, which provides acquisition and predevelopment financing for affordable housing development in the City.

Courtney Wolf is a master of urban planning candidate specializing in the environment, transportation, and infrastructure. She received a bachelor of arts in communications from Boston College. Her academic interests include sustainable development, environmental policy, and how land use affects resource allocation. She is on the board of the Wagner Transportation Association.

Carrie Wood is a 2009 master of public administration candidate focusing on health policy and management. Carrie developed an interest in national and international health policy through her four years of employment as a registered nurse in pediatrics and in a Neonatal ICU.

Suzanne Zuppello is a senior in the Gallatin School of Individualized Study at NYU, where she will receive a bachelor of arts in human rights studies and the role of government. Her interest in water issues stems from her volunteer experience in Honduras, where she helped to implement clean water delivery systems in rural communities.

STAFF BIOGRAPHIES

Editor-In-Chief

Sara Courtney Brown holds a bachelor of arts from Rutgers College and is a 2009 master of public administration candidate with an international specialization. Sara worked for more than five years as a paralegal in immigration and nationality law and interned at the UN Secretariat with the Population Policy Section of the UN Department of Economic and Social Affairs. She is currently a Program Assistant at the New York University Center for Dialogues, a think tank that focuses on promoting policy and cultural dialogue between the Muslim world and the West. Sara's interests include refugee and migration policy, international development, climate change policy, Middle East affairs, and experimental gourmet cooking.

Managing Editor

Donzelina A. Barroso is a 2009 master of public administration candidate with a finance specialization. Donzie is a native New Yorker and has a decade of experience working as a philanthropic advisor. She received her bachelor of arts *cum laude* in medieval and renaissance studies from Barnard College. Her areas of interest include rural poverty and equity of access to social services. In addition to working on the *Wagner Review*, she is also Treasurer of the Nonprofit Network at Wagner. Her interview, with Nobel Prize-winning author, José Saramago, which she translated from Portuguese to English, was published in *The Paris Review* in 1998.

Business Manager

Penelope Madry is a master of public administration candidate, and holds a bachelor of arts in English from Scripps College. Before attending Wagner, Penelope worked for thirteen years in the financial technology industry in a variety of roles, including marketing consultant and senior director of product strategy. Recently, she was employed at Greyston Bakery, a social enterprise, where she developed new products, created a marketing plan, and assisted in the redesign and rollout of a new Website.

Review Board

Galin Brooks is a master of urban planning student specializing in the environment, infrastructure, and transportation. Her planning interests lie at the intersection of land use and transportation and how the two can come together to develop strong, vibrant communities. She welcomed the opportunity to help create a *Wagner Review* that is reflective of the sophisticated and conscientious dialogue present at Wagner.

Moschell A. Coffey, who is originally from Sarasota, Florida, is a master of public administration student with an international specialization. She earned a bachelor of arts with honors in international relations from Rollins College. Moschell is the Project Assistant at the Fellowship for Emerging Leaders of Public Service. Her policy interests include peace and conflict situations, state building, security, and the Middle East.

Justin Eppley has a bachelor of arts in economics and is a master of public administration student with a policy analysis specialization. He is Chief Executive and Editor of *Edgewise Magazine*, an online politics and policy blogging network dedicated to cross-discipline approaches to public policy using new media. Justin interns at the New York City Economic Development Corporation in the Economic Research and Analysis Department. He previously interned in Likoni, Kenya where he did microfinance work.

Kate Heckel is a 2009 master of public administration candidate; she specializes in public policy analysis. She received a bachelor of arts in history with a minor in international studies from Boston College in 2004. Kate began her career at Common Ground, a supportive housing organization in New York City. She is currently an intern at the Downtown Brooklyn Partnership.

Gwendolyn Litvak is a first-year master of urban planning student interested in housing, economic development, and workforce training. Before attending Wagner, she worked as a legislative assistant in Washington, DC, where she focused on economic justice issues and was a field representative in San Francisco. Gwendolyn graduated from University of California, Los Angeles with a bachelor of arts in ethics, social constructions, and public policy.

Matthew Looney is a 2009 master of public administration candidate focusing on public finance and international development. He received a bachelor of arts in international relations and history from The George Washington University. Matt comes to Wagner from Washington, DC, where he worked as a federal lobbyist and consultant for a private firm. He previously served as Director of Development and Special Projects at LNESC, an education organization serving the Latino Community in the US.

Adam Morris is a first-year, master of public administration student who specializes in public finance. Originally from Orlando, Florida, he received his bachelor of arts from Denison University in 2005. Adam spent the next three years interning and working in Washington, DC. Most notably, he interned on the Committee on Ways and Means in the US House of Representatives and for former Congresswoman Stephanie Tubbs Jones of Ohio. Adam is excited to be at Wagner and is eager to learn more about debt structuring.

Andrea Spender is a master of public administration candidate specializing in policy. Andrea holds a bachelor of science from the University of Guelph and a master of library and information science from the University of Western Ontario. She is currently a research librarian and instructor at the New Jersey Institute of Technology. Andrea was also a senior research analyst at McKinsey & Company and a lead researcher at the Boston Consulting Group.

Hyun Shana Sung is a second-year master of public administration student with an international concentration. After graduating from Cornell University with a bachelor of arts in history, she went to work for the Korean government for five years. She returned to New York to pursue a master's degree in public policy. Hyun's interest in international affairs, particularly cross-border environmental issues, grew at Wagner, and she aspires to work for either an international organization or a think tank that focuses on global environmental challenges.

Editorial Board

Karen J. Barry is a 2009 master of public administration candidate. She attended Johns Hopkins University and graduated from the College of Mount Saint Vincent in 2001. Karen worked with numerous government agencies as a consultant focusing on coordination during catastrophic emergency situations. Post-Hurricane Katrina, she was a short-term planner for the Federal Emergency Management Agency. As Emergency Services Training Coordinator at the American Red Cross in Greater New York, she responded to both September 11th and Flight 587.

Teresa Bergey is a master of urban planning candidate who specializes in international urban planning. She holds a bachelor of arts *summa cum laude* in environmental design and Spanish from the State University at New York at Buffalo. Teresa is AICP-certified and currently a senior planner/project manager for a planning and development consulting firm. Teresa is a recipient of the Schorr Scholarship and the Wagner Public Service Scholarship.

Patricia Bertuccio is currently earning her masters of urban planning at Wagner. She graduated from Boston University with a bachelor of arts in international relations and a bachelor of science in print journalism. Patricia is a press officer at the NYC Department of Parks & Recreation where she handles the agency's "green beat."

Angela Cheng is a master of public administration candidate specializing in public policy analysis. She received a bachelor of arts in politics from New York University in 2003, with minors in French and journalism. Angela works full time at the Open Society Institute as a program associate for the criminal justice fund grantmaking portfolio. Previously, she worked at Lawyers Alliance for New York and at the *National Law Journal*.

Rebecca DiBennardo is a master of public administration student in the health policy and management program at Wagner. She began editing while working at EngenderHealth as the Grant writing/Youth Program Associate, where she contributed to proposals on a variety of issues, including family planning, youth-friendly services in Latin America, and the human papillomavirus vaccine. Rebecca also co-authored a background paper on Ethiopian youth entitled, "Early intervention for effective prevention: timing is everything!" She currently works as the Graduate Assistant to the Wagner Health Program.

Amenawon Esangbedo is a master of public administration candidate specializing in international public finance. She received her bachelor of arts *cum laude* in economics from Truman State University in 2005. Prior to Wagner, she was an analyst at Chase. Ame interned with the United Nations where she worked on financing for development. She is currently an intern with the Earth Institute at Columbia University, and is involved there with the Millennium Villages scale-up project.

Duane Esteves is a master of public administration candidate specializing in international policy and management with a primary focus on education and economic development. In addition to being an editor for the *Wagner Review*, he is on the Executive Board of the Wagner Volunteer Corps and an active member of the Wagner Education Policy Studies Association. Prior to arriving at New York University, Duane earned two bachelor of science degrees in business.

May Hui is a master of public administration candidate who specializes in policy analysis. May received her bachelor of arts in sociology from Emory University. Prior to coming to Wagner, she volunteered with Navjeevan, a non-governmental organization in Mumbai, India, working primarily with daughters of women who were employed in the red light district. May has also assisted individuals living with homelessness, a criminal record, and in poverty.

Melissa Husby is pursuing a masters of public administration with a specialization in financial management. She also holds a master's degree in museum studies from New York University, and has worked in New York City nonprofits since 2003. She hopes to be executive director or chief operating officer of a museum or arts organization. Originally from Fairbanks, Alaska, Melissa enjoys skiing, woodstoves, and making fun of people who think that 15 degrees Fahrenheit is cold.

Steven Jean is currently a first-year student at Wagner pursuing an international specialization. Steven was previously an editor for New York University's *Journal of Politics and International Affairs*. He has worked for the New York State Attorney General's Office as a mediator, for Chairman of the House Ways and Means Committee, and for Congressman Charles Rangel as an intern. Currently, he is a Senator At-Large on New York University's Student Government Senate.

Grace Lee is in her first year at Wagner. She has an undergraduate degree in visual arts from the University of California, San Diego. With her master of public administration she hopes to acquire the practical knowledge and skills necessary to take on a leadership role in public service, particularly in the arts sector. Prior to joining the Wagner community, she was special projects coordinator at a nonprofit charter school management organization.

Leora Lipton is a master of public administration candidate specializing in management. Leora received her bachelor of arts in political science from Binghamton University—State University of New York in 2003. She is interested in special education policy and related services program management.

Breann Peterson is a master of public administration candidate with an international specialization. She received a bachelor of arts in political science and communication from the University of Southern California. Bree currently works at a small family foundation where she manages a portfolio of local and international grantees. Before coming to Wagner, Bree was a Teach for America first grade teacher at PS 86 in the South Bronx.

Lindsey Reu is a first-year master of public administration student at Wagner, focusing on public policy analysis. She has a bachelor's degree in journalism from the University of Illinois, and works for The New Teacher Project as the communications manager of the NYC Teaching Fellows program.

Lena Serrano, Esquire, is a part-time master of public administration student with an international specialization. Lena works as a family law attorney for a nonprofit organization and as a press intern for Action Against Hunger.

Elizabeth Wolff, MD, is a board-certified family physician and has been active in academic medicine in New York City for nearly ten years. Before her arrival at Wagner, she was the medical director of a community health center in Manhattan. Currently, she works at the University's Student Health Center. A first-year student in the master of public administration's health policy and management program, Elizabeth is specializing in health policy analysis and hopes to lead a not-for-profit healthcare network or guide healthcare policy reform.

Alvin Wong is a master of public administration candidate specializing in finance at Wagner. He received his bachelor of arts degree in history from the University of Maryland. Alvin's interests are primarily in public finance, urban planning, transportation policy, and political economy.

Faculty Advisor

Iohn Gershman is a Clinical Associate Professor of Public Service, Associate Director of New York University's Global Health Master of Public Health Program, and Director of Undergraduate Programs at Wagner. Previously, he was the Director of the Global Affairs Program at the International Relations Center and the Co-Director of Foreign Policy in Focus, a progressive think-tank on US foreign policy and international affairs. He holds a bachelor of arts in international relations and Asian studies from Colgate University and a master's in political science from the University of California, Berkeley, where he is completing his doctoral degree. His research focuses on US foreign policy in East and Southeast Asia, the politics of international financial institutions and multilateralism, and the political economy of democracy and development.

PRODUCTION STAFF

Copy Editor

Eleanor Levine received her bachelor of arts in History from Rutgers University and her master of fine arts in Creative Writing from Hollins University, where she worked on a satirical novel about Nazis and New Jersey. Her fiction and poetry have been published in *Fiction*, *The Denver Quarterly, The California Quarterly*, and the *Wall Street Journal*. She has been copy editing for more than a decade in publishing, academia, advertising, and medical communications.

Designer

Reid Smith received a bachelor of arts degree *cum laude* in English from Temple University in 1984. Reid has served as Production Manager for art270, a Jenkintown, Pennsylvania-based graphic design firm, since 1990. Reid is an avid gardener, sports car nut (currently driving a 1979 Fiat Spider) and spends many hours with a tennis racket or golf club in his hands.

Printer

For more than 125 years, **Cadmus Communications**, a Cenevo Company, has provided end-to-end, integrated graphic communications services to professional publishers, not-for-profit societies, associations, and corporations. They are the world's largest provider of content management and production services to scientific, technical, and medical (STM) publishers and the third largest graphics communications company in North America.

NYU**Wagner**

The Robert F. Wagner Graduate School of Public Service 295 Lafayette Street New York, NY 10012-9604

