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### Contention One is Inherency

#### Current Ports of Entry between U.S. and Mexico are in need of repair and improvements

Cornyn 13 Senator John Cornyn, July 24, 2013, <http://www.cornyn.senate.gov/public/index.cfm?p=NewsRelease>.

**U.S. Sen. John Cornyn, R-Texas, ranking member of the Judiciary Committee’s**

**Immigration, Refugees and Border Security subcommittee, today announced the Government Accountability Office (GAO) has completed a report at his request studying the Administration’s handling of overall performance at U.S.-Mexico ports of entry.**

“**Today’s report confirms** what local leaders, businesses and residents on the border already know**: our southern ports of entry have been neglected for too long.** As a result**, border wait times are going under-reported or unreported, infrastructure and staff are being stretched too thin and mismanaged, and it is becoming harder and harder to ensure safe and efficient trade and travel.**

“Our successful trading relationship with Mexico has the potential to create even more jobs and opportunities for Texans, but our ports of entry must be updated immediately to fully harness that potential. I hope the Obama Administration will heed the GAO’s findings and work with me and local leaders to take swift steps to make much-needed improvements at our ports of entry.”

#### B. Status quo shortfalls in border infrastructure hamper trade — inefficiency and congestion

U.S. Chamber of Commerce 11 — United States Chamber of Commerce, 2011 (“Steps to a 21st Century

U.S.-Mexico Border: A U.S. Chamber of Commerce Border Report,” Available Online at <http://www.uschamber.com/sites/default/files/reports/2011_us_mexico_report.pdf>, Accessed 05-21-2013, p. 18)

Rapid population growth along the border puts increased pressure on infrastructure at a time when government, at all levels, is dealing with inadequate revenues to deal with not only the signiﬁcant backlog of maintenance but also the signiﬁcant investments necessary to create a 21st century infrastructure. Moreover, growth of commercial trafﬁc continues to overwhelm ports of entry to and from the United States and Mexico. From 1990 to 2010, U.S. exports to Mexico grew from $28 billion to $163 billion. Total trade between the United States and Mexico has expanded by more than 600% since 1990. Trucking and rail are the primary modes of transportation for products moving across the border, and both modes are hindered by inefﬁcient infrastructure. By investing in border infrastructure, goods, services, and people will be able to move more efﬁciently, therefore decreasing the costs of doing business. Congestion and inefﬁcient infrastructure produce uncertainty, unreliability, and high costs for international shippers.

### Advantage 1 is Economic Competitiveness

#### Improving border infrastructure facilitates expanded trade — boosting jobs and economic growth

Figueroa 11 — Alejandro Figueroa, Policy and Research Analyst at the North American Center for Transborder Studies at Arizona State University, holds an M.B.A. from the W.P. Carey School of Business at Arizona State University and a B.A. in Political Science and International Studies from Arizona State University, et al., with Erik Lee, Associate Director at the North American Center for Transborder Studies at Arizona State University, former assistant director at the Center for U.S.-Mexican Studies at the University of California-San Diego, holds an M.A. in Latin American Studies from the University of California-San Diego, Rick Van Schoik, Director of the North American Center for Transborder Studies at Arizona State University, former Navy Seal, former managing director of the Southwest Consortium for Environmental Research and Policy, conducted post-graduate studies in philanthropy at Harvard Graduate School of Education and in sustainable development at Tufts University, holds a B.A. in oceanography and engineering from the U.S. Naval Academy, 2011 (“Realizing the Full Value of Crossborder Trade with Mexico,” Report of The North American Center for Transborder Studies at Arizona State University, Available Online at http://21stcenturyborder.files.wordpress.com/2011/12/realizing-the-value-of-crossborder-trade-with-mexico2.pdf, Accessed 05-21-2013, p. 3)

U.S.-Mexico Border Management: Building the Infrastructure for Future Competitiveness

Sharing a 2,000-mile long border with Mexico needs to be recognized as both a challenge and an opportunity. Though improving, our border’s current infrastructure and capacity today reflect the needs of a bygone era. While land ports of entry between the two nations were first envisioned to process the legitimate crossing of people, goods and services across the border, security has taking an overwhelmingly dominant role in recent years, hampering the ability of agencies to efficiently manage border traffic. With this in mind, in May of 2010 the U.S. and Mexico signed the 21st Century Border Management Joint Declaration. Recognizing the importance of fostering the commercial relationship, both countries have agreed to coordinate efforts to enhance economic competitiveness by expediting lawful trade. The basic idea is that developing a modern and secure border infrastructure will give an added boost to our region’s safety and competitiveness in the world. Much Opportunity, but the Real Work Has Only Just Begun The poor infrastructure, the inadequate staffing levels and the heavy focus on security that prevails at the U.S.–Mexico border have cost both economies billions of dollars in gross output annually. It is past time for our shared border to begin to meet today’s demands, acting as a facilitator and conductor of lawful flows of goods, services and people across our nations so that we may capitalize on the full potential of our partnership. If a billion dollars’ worth of trade crosses the U.S.-Mexico border on a daily basis now while sustaining six million jobs, imagine what could be accomplished with a truly 21st century border.

#### **Strong Shared Infrastructure is critical to a robust supply chain**

Figueroa 12 — Alejandro Figueroa, Research and Policy Analyst at the North American Center for Transborder Studies at Arizona State University, and Erik Lee, Associate Director at the North American Center for Transborder Studies at Arizona State University, and Rick Van Schoik, Director of the North American Center for Transborder Studies at Arizona State University (Alejandro Figueroa, Erik Lee, Rick Van Schoik, North American Center for Transborder Studies — Arizona State University, 01-04-12, “Realizing the Full Value of Crossborder Trade with Mexico”, <http://21stcenturyborder.files.wordpress.com/2011/12/realizing-the-value-of-crossborder-trade-with-mexico2.pdf>, Accessed 07-16-2013 | AK)

The close economic ties between the U.S. and Mexico illustrate the dynamics of a 21st century supply chain as inputs cross the border multiple times, accumulating value added to the goods being exported and imported through our shared border. The automotive, electronics and aeronautic industries, among others, are examples of the highly integrated supply chains between U.S. and Mexican industries that have successfully faced global competition. The North American auto industry has become highly integrated since the original Auto Pact between Detroit and Ontario that began cross-border manufacturing in North America. Today, vehicles made in Mexico have a high U.S. content, while at the same time vehicles manufactured in the U.S. use a large number of Mexican-made auto parts. Supply chains are critical to businesses’ underlying value, growth potential, and economic competitiveness. Unfortunately, supply chains often come to a stop due to border delays, security concerns, and infrastructure constraints. These issues create an environment of uncertainty in the business community, which deters investment, job creation and economic prosperity. Exports clearly create jobs, but what is less apparent is that exports rely on imports. When U.S. firms build and produce things together with firms in Mexico, it is imperative for them to get key components across the border as fast as possible back into their facilities. The sooner they are in, the sooner they may continue to move along the supply chain until they reach the consumer and create a profit for the U.S. firm and the economy. In a just-in-time business environment, the company relies on an efficient process at the border in order to get numerous key components shipped rapidly from Mexico. Mexico has increasingly become a strategic supplier to U.S. industry; Mexico’s intermediate exports contribute to both intermediate and finished goods in the U.S. Capital goods traded between the U.S. and Mexico also play an important role in increasing regional competitiveness. Last year, $70 billion worth of machinery, tools and equipment were traded bilaterally to produce other goods that were in turn consumed locally or sold to foreign markets as North American-made products. The highly complementary nature of this trade illustrates the growing importance of incorporating value-added every time a product crosses the border for further processing. The interconnectivity between the supply chains of both countries help U.S. companies remain competitive in the world marketplace by producing goods for worldwide consumption at competitive prices. Mexico’s proximity to the U.S. allows production to have a high degree of U.S. content in the final product which in turn helps create and sustain jobs in both countries.

#### Modernizing border infrastructure is key global competitiveness

NAFTA Works 13 — a monthly newsletter on NAFTA and related issues (NAFTA Works, Volume 18, Issue 4, April 2013, “Border Infrastructure's Key Role in Expanding U.S.-Mexico Trade”, <http://www.naftamexico.net/wp-content/uploads/2013/05/apr13.pdf>, Accessed 07-21-2013 | AK)

Very few countries in the world have the potential to shape the United States’ manufacturing competitiveness as much as Mexico. It is difficult to overstate the critical importance of this strategic partnership, as trade between both countries reached roughly half a trillion dollars in 2012, maintaining Mexico’s status as the U.S.’ third largest trading partner and its second largest export market as it purchased nearly 1/8 of all U.S. exports. The increased usage of cross-border production lines has resulted in a very unique trading partnership, where working to establish a trade facilitating border infrastructure is now crucial to successfully competing in the global market. In order to understand the true strength of this partnership, a new approach that incorporates the relevance of foreign value-added in exports is required. Consequently, one of the most distinctive factors of U.S.-Mexico trade lies in its qualitative nature. Working together to co-manufacture products entails an intensive intra-industry trade of inputs rather than exclusively trading in finished products, helping to support the 6 million U.S. jobs that depend on trade with Mexico. As a result of this highly integrated production process, on average, 40% of all content in Mexican exports to the U.S. actually originates in the United States. As 82%, or $404 billion, of bilateral trade was carried across the border via surface transportation in 2012, improving the efficiency of trade flows at the U.S. southern Ports of Entry (POE) is imperative to safeguarding a regional competitive edge. Last year, over 44 million tons of food, inputs, components, and finished products crossed by land from Mexico into the U.S. to supply manufacturing plants and supermarkets alike. Far from exclusively benefiting the four Southern U.S. states bordering Mexico, a total of twenty-nine U.S. states had exports to Mexico in excess of $1 billion in 2012, making this one of the most economically significant borders in the world. Additionally, some twenty-three U.S. states depended on Mexico as their No. 1 and No. 2 largest export market in 2012, with states as far north as Michigan exporting over $10 billion. This illustrates that even states’ local economies that are far from the southern border are also major stakeholders when it comes to building a seamless, long haul border infrastructure that is capable of minimizing cross-border business costs. Of the 26 POEs along the southern border that collectively handled more than $1.3 billion in bilateral trade each day in 2012 - virtually all of it tariff free - the largest by far is the Port of Laredo in Texas. This critical POE facilitated more than 3.5 million cross-border commercial truck shipments, and over 500 thousand rail-boxes via railway in both directions, carrying more than $163 billion in goods in 2012 or 35% of all bilateral trade. Considering that forty U.S. states spread across the country use Laredo as their primary POE, this port could truly be considered the U.S.’ main artery for bilateral trade with Mexico. Last year alone, more than $76 billion in U.S. exports to Mexico and $86 billion in imported Mexican goods went through the Laredo POE. Another strategic POE is El Paso, which had 13% of all U.S.- Mexico trade pass through in 2012. With over $66 billion in goods being traded here, it is the second busiest port for bilateral trade. As an example of its relevance, El Paso is the second largest POE for U.S. electrical machinery exports to Mexico, as it was responsible for the timely crossing of 26% of this vital industry’s exports. Along the western side of the border, Otay Mesa is the U.S.’ third largest POE for bilateral trade with Mexico, which had more than $35 billion of goods move through this facility in 2012. An astonishing 99% of trade between California and Mexico is conducted by trucks, therefore ensuring that the state’s busiest commercial truck crossing operates at maximum efficiency is critically important. In order to enhance and also secure regional competitiveness, the strength of both countries’ industrial capabilities lies in the joint effort to minimize the logistical costs placed on regional manufactures. By expanding and modernizing the current border infrastructure, both countries promote a world-class logistical capability that improves border wait times, customs procedures, and trusted traveler or shipper programs. As a result, both countries are working together through the 21st Century Border Initiative to address shared challenges. Progress has been achieved over the past three years that has helped to facilitate the secure and efficient flow of goods and people along the border. Three new international bridges, one in Arizona and the other two in Texas, were constructed to support this growing demand. Becoming operational in 2009, the Anzalduas International Bridge in Texas was the first new bridge to be built in over a decade, during which bilateral trade grew by 76%.

There are two Impact scenarios to the Econ Advantage

Scenario One is Trade Protectionism

**Decline in trade competitiveness results in protectionism**

 **Farqee 06** (“Would Protectionism Defuse Global Imbalances and Spur Economic Activity? A Scenario Analysis,” Staff Report no. 268 December 2006, Hamid Faruqee Douglas Laxton Dirk Muir Paolo Pesenti, Federal Reserve Bank of New York, <http://app.ny.frb.org/research/staff_reports/sr268.pdf> )hhs-ps

Unprecedented global imbalances have stirred an ongoing and lively policy debate. Can they be sustained, and for how long? If not, can an orderly rebalancing be achieved without severely disrupting international trade and .nance or global growth? Past episodes tell a cautionary tale regarding the implications of very large de.cits (and their reversals).2 Guided by lessons of history, mainstream views worry about the .inevitable. external adjustment and the prospect of large swings in the value of the dollar.3 Others believe that concerns are overblown and question the instructiveness of past experiences, noting that an expanding universe of current accounts, declining correlations between saving and investment, and accumulating gross (as well as net) foreign asset positions4 signify a rapidly shifting global landscape.5 But attention and concern attached to external balances have, in fact, increased not decreased in recent years. In particular, persistent and widening trade and payments imbalances have fuelled rising protection sentiment in a number of countries. In the United States, for example, several congressional bills concerning trade imbalances have been written.6 At the heart of the controversy are sizable trade surpluses in emerging Asia, paired with substantial foreign reserve accumulation and large-scale intervention in the currency market to limit exchange rate .exibility. In fact, roughly three-quarters of the vast global reserve build-up between 1999 and 2004 is attributable to Asia. During that time, key Asian central banks . including India, South Korea, Taiwan, Hong Kong, Singapore and Malaysia . as a group have more than doubled their o¢ cial holdings of foreign securities, mostly U.S. Treasuries, to over $2 1/2 trillion. Japan and China account for the bulk of these holdings, although oil exporting countries have more recently played a larger role in foreign reserve accumulation.7 Central to their .new Bretton Woods. hypothesis, Dooley, Folkerts-Landau and Gar-ber (2004, 2006) emphasize how these policy actions are deliberately related to export-led growth and development strategies . strategies that could remain in place for a very long time.8 Undervaluation of Asian currencies . which Goldstein (2004) estimates to be 15 to 25 percent in the case of China . obviously does not help to unravel rising trade frictions. And beyond exchange rate policies, another contentious issue is implicit export subsidies, including inter-alia tax advantages and other government preferences, state-owned enterprises, and export .zones.,9 whose trade implications are often not dissimilar to those of an undervalued currency.10 But .scapegoating often emanates from domestic economic woes, and the recent situation may not be an exception. In the recent past job growth in the United States has been below previous economic recoveries, particularly in sectors exposed to foreign competition. Wages have also reacted slowly to changing business conditions. Not surprisingly, politicians and business leaders alike are tempted to support protectionism as an appealing and politically costless recipe to address internal and external problems.

**US protectionism causes resource wars, religious wars and bioterrorism**

 **Panzner 8,** faculty at the New York Institute of Finance, 25-year veteran of the global stock, bond, and currency markets who has worked in New York and London for HSBC, Soros Funds, ABN Amro, Dresdner Bank, and JPMorgan Chase (Michael, Financial Armageddon: Protect Your Future from Economic Collapse, Revised and Updated Edition, p. 136-138, googlebooks) Continuing calls for curbs on the flow of finance and trade will inspire the United States and other nations to spew forth protectionist legislation like the notorious Smoot-Hawley bill. Introduced at the start of the Great Depression, it triggered a series of tit-for-tat economic responses, which many commentators believe helped turn a serious economic downturn into a prolonged and devastating global disaster, But if history is any guide, those lessons will have been long forgotten during the next collapse. Eventually, fed by a mood of desperation and growing public anger, restrictions on trade, finance, investment, and immigration will almost certainly intensify. Authorities and ordinary citizens will likely scrutinize the cross-border movement of Americans and outsiders alike, and lawmakers may even call for a general crackdown on nonessential travel. Meanwhile, many nations will make transporting or sending funds to other countries exceedingly difficult. As desperate officials try to limit the fallout from decades of ill-conceived, corrupt, and reckless policies, they will introduce controls on foreign exchange, foreign individuals and companies seeking to acquire certain American infrastructure assets, or trying to buy property and other assets on the (heap thanks to a rapidly depreciating dollar, will be stymied by limits on investment by noncitizens. Those efforts will cause spasms to ripple across economies and markets, disrupting global payment, settlement, and clearing mechanisms. All of this will, of course, continue to undermine business confidence and consumer spending. In a world of lockouts and lockdowns, any link that transmits systemic financial pressures across markets through arbitrage or portfolio-based risk management, or that allows diseases to be easily spread from one country to the next by tourists and wildlife, or that otherwise facilitates unwelcome exchanges of any kind will be viewed with suspicion and dealt with accordingly. The rise in isolationism and protectionism will bring about ever more heated arguments and dangerous confrontations over shared sources of oil, gas, and other key commodities as well as factors of production that must, out of necessity, be acquired from less-than-friendly nations. Whether involving raw materials used in strategic industries or basic necessities such as food, water, and energy, efforts to secure adequate supplies will take increasing precedence in a world where demand seems constantly out of kilter with supply. Disputes over the misuse, overuse, and pollution of the environment and natural resources will become more commonplace. Around the world, such tensions will give rise to full-scale military encounters, often with minimal provocation. In some instances, economic conditions will serve as a convenient pretext for conflicts that stem from cultural and religious differences. Alternatively, nations may look to divert attention away from domestic problems by channeling frustration and populist sentiment toward other countries and cultures. Enabled by cheap technology and the waning threat of American retribution, terrorist groups will likely boost the frequency and scale of their horrifying attacks, bringing the threat of random violence to a whole new level. Turbulent conditions will encourage aggressive saber rattling and interdictions by rogue nations running amok. Age-old clashes will also take on a new, more healed sense of urgency. China will likely assume an increasingly belligerent posture toward Taiwan, while Iran may embark on overt colonization of its neighbors in the Mideast. Israel, for its part, may look to draw a dwindling list of allies from around the world into a growing number of conflicts. Some observers, like John Mearsheimer, a political scientist at the University of Chicago, have even speculated that an "intense confrontation" between the United States and China is "inevitable" at some point. More than a few disputes will turn out to be almost wholly ideological. Growing cultural and religious differences will be transformed from wars of words to battles soaked in blood. Long-simmering resentments could also degenerate quickly, spurring the basest of human instincts and triggering genocidal acts. Terrorists employing biological or nuclear weapons will vie with conventional forces using jets, cruise missiles, and bunker-busting bombs to cause widespread destruction. Many will interpret stepped-up conflicts between Muslims and Western societies as the beginnings of a new world war.

Scenario Two is the Global Economy

#### US-Mexico economic integration prevents global recession.

Schiffer ‘13

[Michael Schiffer President of the Inter-American Dialogue “A More Ambitious Agenda: A Report of the Inter-American Dialogue’s commission on Mexico-US relations.” February <http://www.thedialogue.org/PublicationFiles/IAD9042_USMexicoReportEnglishFinal.pdf>]

The first is to reinforce and deepen economic cooperation. That includes increasing the productivity and international competitiveness of both nations, opening opportunities for longterm growth and job creation, and setting the stage for further economic integration. In a world of persistent, widespread economic insecurity, the more the United States and Mexico coordinate and integrate their economies, the more ably they can compete for global markets. Their economic cooperation is more vital than ever as drivers of the global economy falter—as the European financial crisis persists, as China enters a period of slower growth, as Japan remains stalled, and as many emerging markets appear increasingly vulnerable. Among the concrete objectives the two countries should consider are development of a framework to make their shared labor markets more efficient and equitable; formation of a coherent North American energy market (which could help meet the needs of energy-poor Central America); and coordination among the United States, Mexico, and Canada in negotiations toward the Trans-Pacific Partnership (TPP).

**Global economic decline leads to miscalc, escalation and extinction**

**Harris and Burrows, ‘09** [Mathew, PhD European History at Cambridge, counselor in the National Intelligence Council (NIC) and Jennifer, member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis” <http://www.ciaonet.org/journals/twq/v32i2/f_0016178_13952.pdf>]

Increased Potential for Global Conflict Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample Revisiting the Future opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on **the sustainability** of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groups\_inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacks\_and newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises. 36 Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

### Advantage 2 is Border Biodiversity

#### The US-Mexico border is key to Biodiversity

Nabhan 2K - Gary Paul, writer, lecturer and world-renown conservation scientist (“Biodiversity: The Variety of Life that Sustains Our Own,” Arizona-Sonora Desert Museum, January 2000, http://www.desertmuseum.org/books/nhsd\_biodiversity.php)
An excerpt from A Natural History of the Sonoran Desert There is a place in the Sonoran Desert borderlands which, more than any other I know, capsulizes what the term diversity has come to mean to both natural and social scientists alike. The place is a desert oasis known as Quitobaquito, centered on a spring-fed wetland at the base of some cactus-stippled hills that lie smack dab on the U.S.-Mexico border. Whenever I walk around there, I am astounded by the curious juxtapositions of water- loving and drought-tolerating plants, of micro-moths wedded to single senita cacti, and hummingbirds that have traveled hundreds of miles to visit ocotillos, of prehistoric potsherds of ancient Patayan and Hohokam cultures side by side with broken glass fragments left by O'odham, Anglo- and Hispanic-American cultures. Walk down from its ridges of granite, schist, and gneiss, and you will see organpipe cactus growing within a few yards of arrowweed, cattails, and bulrushes immersed in silty, saline sediments. The oasis has its own peculiar population of desert pupfish in artesian springs just a stone's throw from the spot where a native caper tree makes its only appearance in the United States. The tree itself is the only known food source for the pierid butterfly that is restricted in range to the Sonoran Desert proper. More than 270 plant species, over a hundred bird species, and innumerable insects find Quitobaquito to be a moist harbor on the edge of a sea of sand and cinder. Not far to the west of this oasis, there are volcanic ridges that have frequently suffered consecutive years without measurable rainfall, and their impoverished plant and animal communities reflect that. Quitobaquito is naturally diverse, but its diversity has also been enhanced rather than permanently harmed by centuries of human occupation. Prehistoric Hohokam and Patayan, historic Tohono O'odham, Hia c-ed O'odham, Apache, Cucupa, and Pai Pai visited Quitobaquito for food and drink long before European missionaries first arrived there in 1698. Since that time, a stream of residents from O'odham, exican, Jewish, and Mormon families have excavated ponds and irrigation ditches, transplanting shade and fruit trees alongside them. They intentionally introduced useful plants, and accidentally brought along weedy camp-followers, adding some fifty plant species to Quitobaquito over the centuries. Native birds and mammals have also been affected by human presence there, and some increased in number during the days of O'odham farming downstream from the springs. All in all, Quitobaquito's history demonstrates that the desert's cultural diversity has not necessarily been antithetical to its biological diversity; the two are historically intertwined. In fact, the Sonoran Desert is a showcase for understanding the curious interactions between cultural and biological diversity. There are at least seventeen extant indigenous cultures that each has its own brand of land management traditions, as well as the dominant Anglo- and Hispanic-American cultures which have brought other land ethics, technologies, and strategies for managing desert lands into the region. While some cultural communities such as the Seri were formerly considered passive recipients of whatever biodiversity occurred in their homeland, we now know that they actively dispersed and managed populations of chuckwallas, spiny-tailed iguanas, and columnar cacti. Floodwater farmers such as the Tohono O'odham and Opata dammed and diverted intermittent watercourses, planted Mesoamerican crops, and developed their own domesticated crops from devil's claw, tepary beans, and Sonoran panic grass. Anglo- and Hispanic-American farmers and ranchers initiated other plant and animal introductions, and dammed rivers on a much larger scale. Each of these cultures has interacted with native and exotic species at different levels of intensity, including them in their economies, stories, and songs. From an O'odham rainmaking song that echoes the sound of spadefoots, to the Western ballad "Tumblin' Tumbleweeds" written in Tucson over a half century ago, native and invasive species have populated our oral and written traditions as curses, cures, and resources. Technically speaking, this stuff we call diversity eludes one single definition. For starters, however, biodiversity (short for biological diversity) can be generally thought of as the "variety of life on earth." Scientists use this term when discussing the richness of life forms and the heterogeneity of habitats found within or among particular regions. Biodiversity in this sense is often indicated by the relative richness of species in one habitat versus another. Thus it is fair to say that riparian gallery forests of cottonwoods and willows along desert rivers typically support more avian biodiversity-a greater number of bird species-than do adjacent uplands covered with desertscrub vegetation. Similarly, there is greater biodiversity in flowering vines in the moist tropical forests of southern exico than there is in the Sonoran Desert of northern Mexico. It is worth noting, however, that ecologists such as E.O. Wilson first coined the term biodiversity to signify something far more complex than the mere number of species (termed species richness) found in any given area. Usually ecologists also consider the number of individuals within each species when they assess diversity or heterogeneity. An area where one desert wildflower such as the California poppy dominates eight other species is considered to be less diverse than an area with the same eight species where the numbers of each are more evenly distributed. As Kent Redford of The Nature Conservancy has recently explained, "A species-focused approach to biodiversity has proved limiting for a number of reasons....[The] use of just species as a measure of biodiversity has resulted in conservation efforts focusing on relatively few ecosystems while other threatened ones are highly ignored. Species do not exist in a vacuum, and any definition of biodiversity must include the ecological complexes in which organisms naturally occur and the ways they interact with each other and with their surroundings." The integrity of biodiversity can be teased apart into the following components. Although each of them may be separated out by scientists for study, they do not truly exist "apart" from one another. ECOSYSTEM DIVERSITY: the variety of landscapes found together within any region, and the ways in which their biotic communities interact with a shared physical environment, such as a watershed or coastal plain. A landscape interspersed with native desert vegetation, oasis-like cienegas, riparian woodlands, and croplands is more diverse than one covered entirely by one crop such as cotton. The Colorado River Delta was once a stellar example of ecosystem diversity, displaying a breath-taking mixture of riparian gallery forests, closed-canopy mesquite bosques, saltgrass flats, backwater sloughs, rivers, ponds, and Indian fields. Much of it is now dead, except for the hypersaline wetlands known as the Cienega de Santa Clara. BIOTIC COMMUNITY DIVERSITY: the richness of plants, animals, and microbes found together within any single landscape mosaic; such a mosaic can range in scope from the regional to the watershed level. This richness can be shaped by a variety of factors, ranging from the age of the vegetation to land use to soil salinity and fertility. For example, the number of species on well-drained, ungrazed desert mountain slopes covered by columnar cacti, ancient desert ironwoods, and spring wildflowers is greater than that on an alkali flat grazed by goats, where only saltbush, saltgrass, and seepweed may grow. The Rincon ountains east of Tucson demonstrate a gradient of communities, each with its own diversity, as they rise from desertscrub to xeric woodlands, and coniferous forests. INTERACTION DIVERSITY: the complexity of interactions within any particular habitat, such as the relationships between plant and pollinator, seeds and their dispersers, and symbiotic bacteria and their legumes. A pine-oak woodland in Arizona's "sky islands"harbors more interspecific interactions than does an even-aged pine plantation. Ramsey Canyon in the Huachuca ountains showcases such interaction diversity, with over a dozen hummingbirds, as well as bats, bees, and butterflies visiting its myriad summer flowers. SPECIES DIVERSITY: the richness of living species found at local, ecosystem, or regional scales. A well-managed desert grassland hosts more species than can be found in a buffelgrass pasture intentionally planted to provide livestock forage without consideration of wildlife needs. Quitobaquito, discussed above, is as fine an example of localized species diversity as we have anywhere in the binational Southwest. GENETIC DIVERSITY: the heritable variation within and between closely-related species. A canyon with six species of wild out-crossing beans contains more genetic variation than does a field of a single highly-bred hybrid bean. Indian fields in southern Sonora demonstrate this concept, for their squashes hybridize with weedy fieldside gourds, and their cultivated chile peppers are inflamed by genetic exchange with wild chiltepines. All of these components of biodiversity ensure some form of environmental stability to the inhabitants of a particular place. A landscape with high ecosystem diversity is not as vulnerable to property-damaging floods as a bladed landscape is, for a mix of desert grassland and wetlands serves to buffer downstream inhabitants from rapid inundations. A diverse biotic community is less likely to be ravaged by chestnut blight or spruce budworm than a tree plantation can be. A cactus forest with diverse species of native, wild bees is less vulnerable to fruit crop failure than are orchards or croplands that are exclusively dependent upon the non-native honeybees. A desert grassland with multiple species of grasses and legumes cannot be as easily depleted of its fertility and then eroded as can one with a single kind of pasture grass sucking all available nutrients out of the ground. And finally, a Pima Indian garden intercropped with many different kinds of vegetable varieties will not succumb to white flies or other pests as easily as will an expansive, irrigated lettuce field in the Imperial Valley. In short, more of "nature's services" - the economic contributions offered by intact ecosystems-are possible when we manage these ecosystems to safeguard or restore their biodiversity, and not allow it to be depleted. Recent estimates by environmental economists suggest that the dollar value of the services such as flood protection and air purification provided by the world's intact wild ecosystems averages thirty-three trillion dollars per year, compared to the eighteen trillion dollar Gross National Product of all nations' human-made products. The message is clear: when a mosaic of biotic communities is saved together and kept healthy within a larger landscape, few endangered species fall between the cracks and succumb to extinction processes. In contrast, a small wildlife sanctuary designed to save a single species often fails to achieve its goal, for the other organisms which that species ultimately needs in its presence have been ignored or eliminated. Not only do humans benefit from the conservation of large wildlands landscapes, but many other species do as well. How does this play out in our Sonoran Desert region? Ask most people to characterize life in the desert and few will think to mention the word "diversity" as part of their thumbnail sketch of this place. Most of us keep in our heads those pictures of bleak, barren, blowing sandscapes when we hear the word "desert." The Sonoran Desert does contain one major sea of sand, as well as a long corridor of coastal dunes along the Gulf of California, but even these are seasonally lush with unique and thriving life forms. As one spends more time in a range of Sonoran Desert habitats, one is constantly surprised by how many plants and animals are harbored here. Travel out of Sonoran Desert vegetation into the higher mountain ranges held within the region and even more astonishing levels of biodiversity can be found. In fact, the "sky islands" of southeastern Arizona and adjacent Sonora are now recognized by the Inter-national Union for the Conservation of Nature as one of the great centers of plant diversity north of the tropics. When we compare our desert with others, the contrast is striking. Overall, **the Sonoran Desert has the greatest diversity of plant growth forms**- architectural strategies for dealing with heat and drought-**of any desert in the world**. From giant cacti to sand-loving underground root parasites, some seventeen different growth forms coexist within the region. Often, as many as ten complementary architectural strategies will be found together, allowing many life forms to coexist in the same patch of desert. Biodiversity in the desert is often measured on a scale that would not be used in the tropical rainforest. Desert ecologists have found twenty kinds of wildflowers growing together in a single square yard (.84 m2), while a single tropical tree might take up the same amount of space. On an acre (.4 ha) of cactus forest in the Tucson Basin, seventy-five to 100 species of native plants share the space that three mangrove shrubs might cover in swamp along a tropical coast. These levels of diversity are a far cry from the "bleak and barren" stereotype, and it may well be that the Sonoran Desert region is more diverse than other arid zones of comparable size. Consider for example, the flora of the Tucson Mountains, which Arizona-Sonora Desert Museum research scientists recently inventoried with a number of their colleagues. In an area of less than forty square miles (100 km2), this botany team encountered over 630 plant species-as rich a local assortment of plants as any desert flora we know. This small area contains roughly one-sixth of the Sonoran Desert's entire plant diversity. It is disproportionately rich relative to its size, its paucity of surface water, and its elevational range. Such a diversity of wildflowers and blossoming trees attracts a diversity of wildlife as well. In the Sonoran Desert area within a thirty mile radius of Tucson, you can find between 1000 and 1200 twig- and ground-nesting native bees (all of them virtually "stingless"). As the Desert Museum's research associate Stephen Buchmann wryly notes, "this may mean that **the Sonoran Desert region is the richest bee real estate anywhere in the world**-the entire North American continent has only 5000 native bee species." Desert wildflowers attract more than bees. Southern Arizona receives visits from more hummingbird species-seventeen in all-than anywhere else in the U.S. Other pollinator groups, such as butterflies and moths, are well-represented in the region as well. Single canyons near the Arizona-Sonora border may harbor as many as 100 to 120 butterfly species, and moth species may number five to ten times higher than that in the same habitats. When all pollinating organisms breeding or passing through here are counted, it may be that the greater Sonoran Desert has as large a pollinator fauna as any bioregion in the world. This region is also rich in small mammals and reptiles. Some eighty-six species of mammals have ranges centered within the San Pedro National Riparian Area alone, a record unsurpassed by any natural landscape of comparable size in the U.S.; the area contains half of all mammal species in the binational Sonoran Desert. At least ninety-six species of reptiles are endemic to the Sonoran Desert-found here and nowhere else in the world. Why is such diversity present in a land of little rain? For starters, our bimodal rainfall pattern brings out completely different suites of wild-flowers and their attendant insects at different times of the year. In addition, we benefit from a more gradual transition between tropical nature and desert nature than does the Chihuahuan Desert on the other side of the Sierra Madre-many tropically-derived life forms reach their northernmost limits in the Sonoran Desert due to its relatively frost-free climes. Of course, tropic rainforests are much more diverse in the total number of species they have throughout their biome, in part because of their ages and their high energy budgets. However, there may be more turnover in species from place to place in the Sonoran Desert than in some tropical vegetation types. That is to say, many desert plants and insects are "micro-areal" - occurring only within a 100 by 100 mile spots on the map. Particularly in Baja California, there are extremely high levels of endemism, including some 552 plants unique to the peninsula. Nevertheless, it remains true that the highest levels of local diversity in this desert region occur where water accumulates. Some of the highest breeding bird densities recorded anywhere in the world come from riparian forests along the Verde and San Pedro river floodplains. More than 450 kinds of birds have historically nested or migrated along the Colorado, San Pedro, and Santa Cruz rivers. And yet, if riparian habitats were among our richest, what have we lost with the removal of cottonwoods from ninety percent of their former habitat in Arizona? Ornithologists cannot name a single Sonoran Desert bird that has gone extinct with riparian habitat loss, but many of the eighty species of birds dependent on these riparian forests have locally declined in abundance. A single desert riparian mammal-Merriam's mesquite mouse-is now extinct due to the loss of riparian habitat at the hand of groundwater pumping, arroyo cutting, and overgrazing. exican wolves and black bears that formerly frequented our river valleys are among those mammals no longer found in the Sonoran Desert proper. Conservation International has estimated that as much as sixty percent of the entire Sonoran Desert surface is no longer covered with native vegetation but is dominated by the 380-some alien species introduced to the region by humans and their livestock. Alien plants such as buffelgrass now cover more than 1,400,000 acres of the region, at the expense of both native plants and animals. Tamarisk trees choke out native willow and cottonwood seedlings. Invasive weeds such as Johnson grass and Sahara mustard have taken over much of certain wildlife sanctuaries and parks in the desert, outcompeting rare native species. Other invasive species such as Africanized bees and cowbirds also compete with the native fauna. Biological invasions are now rated among the top ten threats to the integrity of Sonoran Desert ecosystems, whereas a half century ago they hardly concerned ecologists working in the region. These invaders somehow reach even the most remote stretches of the desert, to the point of being ubiquitous. The wholesale replacement of natives by aliens is enough of a problem, but desert biodiversity has been even more profoundly affected by habitat fragmentation-the fracturing of large tracts of desert into pieces so small that they cannot sustain the interactions among plant, pollinator, and seed disperser. Such fragmentation does not necessarily lead to immediate extinctions, just declines-there is a time lag before a species' loss of interactions with others leads to complete reproductive failure. Fragmentation caused by urbanization is now considered the number-one threat to the biodiversity of the region and is not expected to diminish during our lifetimes. The population of Arizona's Maricopa County in the year 2025 is expected to be two and a half times what it was in 1995, and similar growth rates are anticipated along the entire desert coastline of the Sea of Cortez. In a sense, humans are making the Sonoran Desert much more like the old (and erroneous) stereotype of a barren wasteland. As more than forty dams were constructed along rivers in this century, old-timers witnessed hundreds of miles of riparian corridors dry up. Groundwater overdraft has also impoverished desert and riparian vegetation, as farms and cities pump millions more acre-feet out of the ground than rainfall in the region can naturally recharge. The roots of plants are left high and dry above the water table. Most of the Sonoran Desert was not at all naturally barren, but our misunderstandings have impoverished one of the richest arid landscapes on the planet. That is why the Desert Museum has endorsed a long-term Conservation Mission Statement which begins with these words from ecologist D.M. Bowman: "So what is biodiversity?...the variety of life on this planet is like an extra-ordinarily complex, unfinished, and incomplete manuscript with a hugely varied alphabet, an ever-expanding lexicon, and a poorly understood grammar....Ripping the manuscript to pieces because we want to use the paper makes little sense, especially if the manuscript says that 'to survive you shall not destroy what you do not understand'. Our mission as ecologists must be to interpret the meaning of biodiversity. The urgent need for this mission, and our current ecological ignorance, must be forcefully communicated to the public." Instead of seeing future inhabitants rip out any more pages essential to the desert's story, the conservation organizations of the region have begun to work together to ensure that the most important corridors and secluded refugia for desert flora and fauna are identified and protected or restored. These critical areas - essential to the flow of diversity from source to sink, from headwaters to river mouth, and from tropical wintergrounds to summer nesting areas - must be kept from further fraying if the fabric of the Sonoran Desert is to remain intact. Scientists can prioritize such areas in terms of their value to biodiversity, but they will be safeguarded for future generations only if a broad spectrum of society is involved in endorsing their protection.

#### NADBank transportation infrastructure is key to flexibility, which is critical to solve for biodiversity

Kaplan and Hammacher 2000 - Gordan, attorney with the firm of Hillyer &. Irwin in San Diego and Linda K., attorney (“A Bigger Role for NAFTA's Development Bank?,” San Diego Business Journal, 11/13/00, http://ehis.ebscohost.com/ehost/detail?sid=74ef2ace-3feb-4b1f-80f5-660cbb179c88%40sessionmgr113&vid=1&hid=114&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=f5h&AN=3826486&anchor=toc)
Narrowly Focused Mandate¶ NADBank's mandate is, however, narrowly drawn in terms of geographic scope as well as in terms of the types of projects the bank can undertake. The bank is limited by its charter to providing financing and other forms of assistance for projects in the area within 100 kilometers (about 62 miles) north and south of the U.S.-Mexican border.¶ The charter further limits the bank's undertakings within this geographic area to "environmental infrastructure projects," which are defined as those "that will prevent, control or reduce environmental pollutants or contaminants, improve the drinking water supply, or protect flora an.d fauna so as to improve human health, promote sustainable development, or contribute to a higher quality of life."¶ However, another charter provision directs that "preference" must be given to projects relating to water pollution, wastewater treatment, and municipal solid waste management. As a result of this charter directive, the bank's undertakings are confined as a practical matter to such "preferred" projects only.¶ As of June, NADBank had authorized $265.4 million in loans and grants for 29 such projects on both sides of the border. These 29 projects, when completed, will involve a total cost and investment from private and public sources of $831.3 million. San Diego has received $17.2 million for the South Bay Water Reclamation Plant (total cost $99.6 million), while Tijuana has received $18.5 million for a sewage and wastewater treatment project to eliminate raw sewage flowing into the Tijuana River (total cost $19.5 million).¶ Border Projects¶ Other communities along the California/Mexico border have received $43.8 million for eight projects (total cost $127.1. million). Communities along the Texas/Mexico border have been the biggest beneficiaries of NADBank programs, receiving some $138.15 million for .13 projects (total cost $518.86 million).¶ NADBank has clearly demonstrated an ability to leverage the capital resources available to it into considerably greater total financing for projects. But the bank could do much more if it were not constrained by a mandate which imposes a limited geographic scope on its activities and requires it to focus narrowly on projects involving water pollution, wastewater treatment and municipal solid waste management.¶ This restricted mandate results in under-utilization of NADBank's lending capacity, which severely limits the bank's ability to generate revenues and provide for future loans and grants, which translates overall into less funds being available for the **infrastructure needs of the border-region communities** **NADBank is supposed to serve**.¶ At present, NADBank's total lending capacity of some $2 billion has been virtually untouched. The bank's own loans for the 29 projects mentioned above total only $11.12 million.¶ Too Few Projects¶ The bank has had to rely on grants for the balance of the $265.4 million authorized for these projects largely because most of the communities involved are poor, with little ability to repay debt. Moreover, the bank's projections for the next decade indicate that viable projects in the water and municipal solid waste sectors will never use more than 10 percent of its lending capacity, also because most of the communities involved will be too poor to afford loan programs.¶ If NADBank continues to be constrained by the narrow terms of its existing mandate, it appears destined to become a stagnant institution, of little relevance to the developmental needs of the border region, even as these needs grow and become more urgent.¶ The population of the border region is projected to increase by 50 percent over the next 20 years. Sustainable development in the face of this kind of population growth cannot be had simply by concentrating on water and municipal solid waste projects.¶ Expanded Mandate Proposed¶ NADBank has, therefore, proposed an expanded mandate which would create a much larger and more economically viable lending market and enable the bank to address a wide variety of infrastructure needs in the region. A proposed geographic extension of the mandate to 300 kilometers on either side of the border would allow the inclusion of many additional communities that are naturally affected by growth along the border, and whose economies are often directly tied to the border-region economy.¶ It would increase the population covered by NADBank's mandate from the current 10.6 million to 41 million and include such major population centers as Los Angeles, Phoenix and San Antonio on .the U.S. side, and Hermosillo, Chihuahua, Saltillo and Monterrey on the Mexican side.¶ NADBank has also proposed changes to its mandate which would give the bank flexibility to undertake an assortment of infrastructure projects in order to diversify lending prospects and meet the broader developmental needs and environmental concerns of border-region communities.

#### Current growth along the border is destroying biodiversity…co-op key

Van Schoik 4 - Rick, teaches international environmental security, science, and policy at San Diego State University, California (“Biodiversity on the U.S.-Mexican Border,” World Watch Institute, http://www.worldwatch.org/node/567)
The U.S.-Mexican border region has the highest rate of species endangerment in the United States. Some 31 percent of the species listed as endangered by the U.S. Department of Interior are found in the region. On the Mexican side of the border, 85 species of plants and animals are endangered. Not surprisingly, the threats to these species are exacerbated by the fact that the ecosystems in this region are split by a political boundary that greatly complicates conservation efforts. The area along the U.S.-Mexican border has seen extraordinary population growth, and the resulting residential and industrial sprawl along the border can evoke a doomsday vision for the entire strip from the Pacific to the Gulf of Mexico. Already, habitat loss is estimated at 2.5 hectares (more than 6 acres) per day within Tijuana alone. Last summer a coalition of U.S. and Mexican conservation biologists and other experts (the Southwest Consortium for Environmental Research and Policy) met to discuss possible ways of responding to this mounting border crisis. Well aware that the most important principle of biodiversity conservation is the need to protect the largest possible intact landscapes, we focused on identifying ways in which protections could be established that, in effect, crossed the border-regardless where the fences or guards might stand-to encompass whole ecosystems. Establishing effective cross-border policies is not easy. While nations can readily agree to conserve migrating species in their territories, as when Mexico signed on to the United States' Migratory Bird Treaty Act to protect migrating birds half a century ago, protecting adjacent prime natural areas proves much more difficult. Designed to stop humans from freely crossing, borders also stop other species. Since 9/11, the U.S.-Mexican border has been further bolstered by both the Department of Homeland Security (DHS, which was formerly divided into the customs, border patrol, and immigration agencies) and the still somewhat-secret Joint Task Force Six (JTF-6, a multi-service command charged with providing counter-drug-trafficking support). These agencies' efforts and physical infrastructure have done significant damage to wildlife habitats. Their use of sensor fields, roads, and triple fences up to 50 meters deep create erosion and dust. The physical presence of vehicular patrols, all-night artificial lighting, noise, dragging of screens to clear a slate that makes footprints visible, and the clearing of brush also degrade sensitive habitat as homeland security forces seek view and access points. Along the San Diego segment, a proposal to install triple fencing now pits the federal government's ambitions to secure borders against the state and local jurisdiction over environmental issues. "The project would cut a 150-foot swath across a habitat that is home to some of the state's rarest plants and at least three endangered wildlife species," writes California environmental journalist Terry Rodgers. While borders make environmental protection more difficult in many respects, they can also provide unique opportunities for conservation-provided that the neighboring nations are amenable to cooperation. One such form of cooperation is through the designation of parks along borders as "peace parks." During the past year, Israel and Jordan's agreement to build an environmental studies center over their common border illustrated the ability of environmental concerns to serve as a sign that the link between biodiversity and security can be turned around so that it is not seen as an impediment or cost of security but as augmenting security. Conservation attitudes are hugely complicated by poverty and asymmetry at this border. "The [Mexican] green world is ravaged by people whose only path from starvation lies in slashing and burning the jungle to plant a patch of corn," observed New York Times reporter Tim Weiner in 2002. Even in the relatively affluent border region of Mexico, the economic asymmetry between the two countries is so sharp-and land-use so different-that the border is starkly visible to people flying over in airliners.

#### Specifically, Mexico supports 12% of the worlds species

Geo Mexico 10 (This blog supports Geo-Mexico; the geography and dynamics of modern Mexico, the book by Dr. Richard Rhoda and Tony Burton (Sombrero Books 2010). Geo-Mexico is the first book specifically about the geography of the entire country of Mexico, written in English and aimed at an adult audience, ever published, “Mexico’s mega-biodiversity,” http://geo-mexico.com/?p=2765)
People from elsewhere generally think of Mexico as an arid country with lots of cacti. The general impression is that Mexico has relatively little biodiversity in comparison with equator-hugging tropical countries such as Brazil and Indonesia. These impressions could not be farther from the truth. While northern Mexico is indeed arid, many areas in southern Mexico receive over 2,000 mm (80 inches) of annual precipitation, almost entirely in the form of rainfall. The rainiest place in Mexico— Tenango, Oaxaca—receives 5,000 mm (16.4 feet) of rain annually. Mexico's postage stamps regularly celebrate biodiveristy. Click to enlarge Straddling the Tropic of Cancer, Mexico is a world leader in terms of climate and ecosystem diversity. It is one of the only countries on earth with arid deserts, dry scrublands, temperate forests, high altitude alpine areas, subtropical forests, tropical rainforests and extensive coral reefs. The multitude of ecosystems in Mexico supports a very wide range of biodiversity. Mexico’s vegetation zones. The link is to a pdf map (in color) of vegetation zones. The map (all rights reserved) is a color version of Figure 5.1 in Geo-Mexico. Mexico’s Environmental Ministry (SEMARNAT) indicates that there are over 200,000 different species in Mexico. This is about **10% – 12% of all the species on the planet.** About half of all Mexico’s species are endemic; they exist only in Mexico. An unknown number of endemic species were forced to extinction by the intended and unintended importation of Old World species by the Spaniards. The U.N. Environment Programme has identified 17 “megadiverse” countries. The list includes Mexico, the USA, Australia, five South American countries, three African countries, and six Asian counties. Actually, Mexico is among the upper third of this group along with Brazil, Colombia, China, Indonesia and DRC (Democratic Republic of the Congo). The other countries on the list are: the USA, Venezuela, Ecuador, Peru, South Africa, Malagasy Republic, India, Malaysia, The Philippines, Papua New Guinea, and Australia.

#### And, every species matters – biodiversity prevents extinction

**Raj 12** - Consultant ecologist [Prof. P. J. Sanjeeva Raj (Head of the Zoology dept of Madras Christian College), “Beware the loss of biodiversity,” The Hindu, Published: September 23, 2012 00:32 IST | pg. http://tinyurl.com/8oate79

*\*\*We disagree with the author’s use of gendered language*

Biodiversity is so indispensable for human survival that the United Nations General Assembly has designated the decade 2011- 2020 as the ‘Biodiversity Decade’ with the chief objective of enabling humans to live peaceably or harmoniously with nature and its biodiversity. We should be happy that during October 1-19, 2012, XI Conference of Parties (CoP-11), a global mega event on biodiversity, is taking place in Hyderabad, when delegates from 193 party countries are expected to meet. They will review the Convention on Biological Diversity (CBD), which was originally introduced at the Earth Summit or the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. The Ministry of Environment and Forests (MoEF) is the nodal agency for CoP-11. Today, India is one of the 17 mega-diverse (richest biodiversity) countries. Biodiversity provides all basic needs for our healthy survival — oxygen, food, medicines, fibre, fuel, energy, fertilizers, fodder and waste-disposal, etc. Fast vanishing honeybees, dragonflies, bats, frogs, house sparrows, filter (suspension)-feeder oysters and all keystone species are causing great economic loss as well as posing an imminent threat to human peace and survival. The three-fold biodiversity mission before us is to inventorise the existing biodiversity, conserve it, and, above all, equitably share the sustainable benefits out of it. Unique role Contrary to all such utilitarian objectives of biodiversity, the concept of ‘Deep Ecology’ believes in the intrinsic value of every living being, wherein all life is to be respected for its own sake, not for any of its monetary values. There is no living being that is so abject and absolutely useless for its ecosystem, even if we have not yet understood its utility. Every living being discharges its own unique ecosystem functions or services, and hence the loss of any single species destabilises the whole ecosystem. Keystone species render more obvious or even altruistic services to their ecosystems. Hot spots The tropics have the most luxurious biodiversity but, unfortunately, overpopulation by their poor eco-societies, which are compelled to live at the expense of their own biodiversity, poses such great dilemmas and threats to conservationists that ‘hot spots’ had to be identified to save their marginalised poor as well as their biodiversity simultaneously. The Assam Himalayas and the Western Ghats are two such little explored but richest biodiversity treasure banks in India. However, some lacunae in our knowledge base of our biodiversity still exist such as the precise ecosystem functions or services of each species, and also, the economic valuation of benefits from not only every species but also every type of ecosystem and, above all, from the more difficult gene-pools, all of which need to be studied all over the world. The slogan of the Hyderabad CBD CoP-11, inscribed on the logo, in Sanskrit, “Prakruthi: Rakshathi Rakshitha,” and the same in English, “Nature Protects if She is Protected,” truly underscores that humans should realise the symbiotic relation between themselves and nature, so imperative for their mutual survival on planet Earth.

(The writer is a consultant ecologist, His email is rajsanjeeva@gmail.com)

#### Biodiversity and plant species specifically are key to stop major environmental catastrophes

Albert-Ludwigs-Universität Freiburg 11

Albert-Ludwigs-Universität Freiburg (2011, August 14). “Biodiversity key to Earth's life-support functions in a changing world.” ScienceDaily http://www.sciencedaily.com­/releases/2011/08/110811084513.htm

The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. These so-called ecosystem services are what makes Earth inhabitable for humans. They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles. Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services. In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes. In a study published in the current issue of the journal Nature, the research group investigated the extent to which the positive effects of diversity still apply under changing environmental conditions and when a multitude of processes are taken into account. They found that 84 percent of the 147 plant species included in the experiments promoted ecological processes in at least one case. The more years, locations, ecosystem processes, and scenarios of global change -- such as global warming or land use intensity -- the experiments took into account, the more plant species were necessary to guarantee the functioning of the ecosystems. Moreover, other species were always necessary to keep the ecosystem processes running under the different combinations of influencing factors. These findings indicate that much more biodiversity is necessary to keep ecosystems functioning in a world that is changing ever faster. The protection of diversity is thus a crucial factor in maintaining Earth's life-support functions.

#### Biodiversity loss is as devastating as climate change and pollution

**Green Building Elements 12** (“Biodiversity Loss Ranks with Climate Change and Pollution in Terms of Impacts to Environment”, May 10, 2012, <http://www.lexisnexis.com.turing.library.northwestern.edu/hottopics/lnacademic/>) BC

The "Flume Room" at the University of Michigan is used to assess how species diversity affects water quality in streams.

A recent study published by an international research team working at UC Santa Barbara s National Center for Ecological Analysis and Synthesis (NCEAS) has found that loss of biodiversity impacts the environment as significantly as climate change and pollution. The study, titled, a global synthesis reveals biodiversity loss as a major driver of ecosystem change, was published May 2 in the journal Nature. For the past 15 years, ecologists have built a rich understanding of the consequences of humans driving species extinct. What we didn't know before this paper is whether those impacts of species loss rank up there with those from the major drivers of environmental change, said Jarrett Byrnes, a postdoctoral fellow with NCEAS.

Led by Western Washington University biologist David Hooper, the scientists, including those from institutions in the U.S., Canada, and Sweden, examined the effects of various environmental stressors on plant growth and decomposition, two crucial processes in any ecosystem. With data synthesized from almost 200 published studies, they measured the rate of species loss in different ecosystems, and found that the greater the plant species loss, the higher the negative impact on plant growth. The effects of biodiversity loss on biomass were similar to the effects from other environmental stressors, including global warming and pollution. Our work shows that, indeed, the impacts of species loss look to be on par with many kinds of human-driven environmental change, said Byrnes. And more intriguingly, it suggests that if environmental change also causes loss of species, ecosystem functions like productivity could get hit with a 1-2 punch. The news looks bleak, with some projections suggesting that, at the current rate of biodiversity loss, Earth may face another mass extinction within 240 years. To combat this scenario, said Byrnes, species loss has to be considered alongside the more prominent forms of environmental change. Researcher measuring the productivity of algae in a stream. For the researchers, there is more to be studied, as they plan to dig deeper into the effects of species loss on multiple functions and explicitly link loss of species to changes in ecosystem services. One thing this study opens up is the need to better understand the interactions between environmental change and species loss. They’re not independent, and may interact in some particularly unexpected ways, said Byrnes.

### Therefore we offer the following Plan:

#### In order to substantially increase its economic engagement toward Mexico, the United States federal government should engage Mexico on the full funding and implementation of the North American Development Bank modernization program.  We'll clarify.

### Contention Two is Solvency

#### Expanding NADBank solves

Villarreal 2012 (M. Angeles, specialist in international trade and finance, “NAFTA and the Mexican Economy,” Congressional Research Service, 06/03/2010, http://www.fas.org/sgp/crs/row/RL34733.pdf, AC)

Expanding NAFTA to a customs union or common market is not likely to happen within the ¶ foreseeable future. ¶ A possible option to address Mexico’s income disparities with the United States is to consider ¶ expanding the mandate of the North American Development Bank (NADBank). NADBank and ¶ its sister institution, the Border Environment Cooperation Commission (BECC), were created ¶ under a bilateral side agreement to NAFTA called the Border Environmental Cooperation ¶ Agreement. The objective of NADBank and BECC is to help U.S.-Mexico border communities ¶ plan and finance environmental infrastructure projects. Some Members of Congress and elected ¶ officials from Mexico have informally discussed the possibility of expanding the mission of the ¶ NADBank to go beyond environmental and border issues. One possibility would be to expand ¶ NADBank projects to include transportation and other types of infrastructure projects. Another ¶ option would be to expand eligible projects to the entire region of Mexico instead of just the ¶ border area. Some policymakers have suggested the possibility of creating an infrastructure fund ¶ that would be managed by NADBank to provide investment in infrastructure, communications, or ¶ education.

#### NADBank’s key to environmental Co-op—But needs the USFG

Taj 6 (Mitra, “Possible shutdown of NADBank worries some U.S. lawmakers,” Tucson Citizen, 3/16/06, http://tucsoncitizen.com/morgue2/2006/03/16/152961-possible-shutdown-of-nadbank-worries-some-u-s-lawmakers/)
“I don’t want to see the NADBank go away,” she said. “It needs to reform itself to be relevant to the communities it serves.” Those communities, Bronson said, are some of the poorest in the country, and need more affordable lending, not less. Holub said the only other institution to which the city could have turned would have been Congress, a historically unreliable funding source for projects along the border. “That’s why the NADBank was created in the first place. Environmental problems had become so enormous along the border,” Holub said, “and Congress was simply not meeting our needs.” Bronson said because environmental problems span both sides of the border, border solutions should also. “There has to be an international agency that works on making improvements on both sides of the border,” Bronson said. Flores said that although the NADBank is doing more to help border communities tackle environmental problems, the binational approach to solving binational problems has been a success so far. “We’ve brought to the board’s attention what we see to be current limitations and obstacles to further enhancing the quality of life in the border regions,” Flores said. “We’ve done that.” For officials in border regions, improving the bank to make it more responsive to the environmental needs of border citizens would be a welcome move.

#### Plan to invest in POE infrastructure is bipartisan

New Policy Institute 2013, Realizing the Strategic Natural Value of our Trade, Tourism, and Ports of Entry with Mexico, New Policy Institute, May 2013.

**Key policies and infrastructure can either help or hinder this enormous economic exchange. Forty-seven U.S.-Mexico land ports of entry facilitate several hundreds of billions dollars in U.S.-Mexico trade every year. Ideally, ports of entry should act as membranes, facilitating healthy interactions (**such as legitimate trade and travel) and preventing unhealthy ones (such as illicit drugs, firearms and human smuggling). And ideally much of the actual inspection and clearance should occur “upstream” from the ports. **Broad bipartisan agreement has developed on the need to improve our land ports of entry with Mexico**. **This is because over** seventy percent of NAFTA trade flows **through these ports of entry as well as an enormous flow of visitors who have a major economic impact on the United States.** Twenty-three states have Mexico as their number one or **number two trading partner, multiplying jobs in both countries**

#### NADBANK solves best – Best at using PPP’s and has Mexican support

Negroponte 12 – Diana, Senior Fellow, Brookings Institution (“[F]acilitate the anticipated tripling of cross-border trade,” Americas Society/Council of the Americas, 12/3/12, http://www.as-coa.org/articles/viewpoints-what-should-top-priority-be-us-mexican-relations)

In order to construct these roads, private-public partnerships are needed. The NADBANK, established 20 years ago to support environmental projects, is the best placed to mobilize these partnerships. The bank's bylaws permit this. However, the environmental impact needs to be interpreted broadly. The Environmental Protection Agency (EPA) could recognize that new roads relieve the congestion and high levels of air pollutants at the border crossing itself. Use of access roads may spread pollution further inland, but the levels of pollutants will be significantly lower than those currently suffered each side of the Rio Grande. NADBANK’s initiative and the White House leadership to facilitate EPA approval could lead to the development of access roads and decongestion at the actual border. Mexican presidential encouragement to NADBANK's directors to seek PPPs and U.S. presidential urging to the EPA for a broad interpretation of its mandate could result in a decade's work of new infrastructure projects. This will facilitate the anticipated tripling of cross-border trade as both countries negotiate a Trans-Pacific Partnership and Mexico negotiates a Pacific Trade Alliance with its South American partners. Presidential decisions to advance on instructing NADBANK to move forward with PPPs for these infrastructure projects are relatively easy. Their consequences will enhance the trade and prosperity of both nations.

### Framework

#### The Role of the ballot

#### Judge, you are a policymaker and need to evaluate the round within the debate space.

#### Only utilitarianism takes into account the inevitability of sacrifices and compromise – any other framework is utopian and inevitably fails.

Nye, prof. of IR at Harvard University, 1986 (Joseph, “Nuclear Ethics”, p. 24)

Whether one accepts the broad consequentialist approach or chooses some other, more eclectic way to include and reconcile the three dimensions of complex moral issues, there will often be a sense of uneasiness about the answers, not just because of the complexity of the problems “but simply that there is no satisfactory solution to these issues – at least none that appears to avoid in practice what most men would still regard as an intolerable sacrifice of value.” When value is sacrificed, there is often the problem of “dirty hands.” Not all ethical decisions are pure ones. The absolutist may avoid the problem of dirty hands, but often at the cost of having no hands at all. Moral theory cannot be “rounded off and made complete and tidy.” That is part of the modern human condition. But that does not exempt us from making difficult moral choices.

1. **Extinction is a qualitatively different impact**

**Sandberg et al 8** - Research Fellow at the Future of Humanity Institute at Oxford University, PhD in computational neuroscience from Stockholm University and is a postdoctoral research assistant for the EU Enhance project

Anders, James Martin Research Fellow at the Future of Humanity Institute at Oxford University, PhD in computational neuroscience from Stockholm University and is a postdoctoral research assistant for the EU Enhance project; Jason Matheny, PhD candidate in Health Policy and Management at Johns Hopkins Bloomberg School of Public Health. He is also a special consultant to the Center for Biosecurity at the University of Pittsburgh Medical Center and co-founder of New Harvest; and Milan Ćirković, senior research associate at the Astronomical Observatory of Belgrade. He is also an assistant professor of physics at the University of Novi Sad in Serbia and Montenegro ,“How can we reduce the risk of human extinction?,” Bulletin of Atomic Scientists, <http://www.thebulletin.org/web-edition/features/how-can-we-reduce-the-risk-of-human-extinction>

In 1983, discussion of human extinction re-emerged when Carl Sagan and others [calculated](http://www.sciencemag.org/cgi/content/abstract/222/4630/1283) that a global thermonuclear war could generate enough atmospheric debris to kill much of the planet's plant life and, with it, humanity. While the "nuclear winter" theory fell out of favor in the 1990s, recent climate models suggest that the original calculations actually **underestimated** the catastrophic [effects](http://www.agu.org/pubs/crossref/2007/2006JD008235.shtml) of thermonuclear war. Moreover, the original model of Sagan and his collaborators supported research showing that supervolcanic eruptions and asteroid or comet impacts could pose comparable extinction risks. Despite these notable instances, in the 61 years since the Doomsday Clock's creation, the risk of human extinction has received relatively scant scientific attention, with a bibliography filling perhaps one page. Maybe this is because human extinction seems to most of us impossible, inevitable, or, in either case, beyond our control. Still, it's surprising that a topic of primary significance to humanity has provoked so little serious research. One of the missions of the [Future of Humanity Institute](http://www.fhi.ox.ac.uk/) at Oxford University is to expand scholarly analysis of extinction risks by studying extinction-level hazards, their relative probabilities, and strategies for mitigation. In July 2008, the institute organized a meeting on these subjects, drawing experts from physics, biology, philosophy, economics, law, and public policy. The facts are sobering. More than 99.9 percent of species that have ever existed on Earth have gone extinct. Over the long run, it seems likely that humanity will meet the same fate. In less than a billion years, the increased intensity of the Sun will initiate a wet greenhouse effect, even without any human interference, making Earth inhospitable to life. A couple of billion years later Earth will be destroyed, when it's engulfed by our Sun as it expands into a red-giant star. If we colonize space, we could survive longer than our planet, but as mammalian species survive, on average, only two million years, we should consider ourselves very lucky if we make it to one billion. Humanity could be extinguished as early as this century by succumbing to natural hazards, such as an extinction-level asteroid or comet impact, supervolcanic eruption, global methane-hydrate release, or nearby supernova or gamma-ray burst. (Perhaps the most probable of these hazards, supervolcanism, was discovered only in the last 25 years, suggesting that other natural hazards may remain unrecognized.) Fortunately the probability of any one of these events killing off our species is very low--less than one in 100 million per year, given what we know about their past frequency. But as improbable as these events are, measures to reduce their probability can still be worthwhile. For instance, [investments](http://www3.interscience.wiley.com/journal/118486553/abstract?CRETRY=1&SRETRY=0) in asteroid detection and deflection technologies cost less, per life saved, than most investments in medicine. While an extinction-level asteroid impact is very unlikely, its improbability is outweighed by its potential death toll. The risks from anthropogenic hazards appear at present larger than those from natural ones. Although great progress has been made in reducing the number of nuclear weapons in the world, humanity is still threatened by the possibility of a global **thermonuclear war()** and a resulting nuclear winter. We may face even greater risks from emerging technologies. Advances in synthetic biology might make it possible to engineer pathogens capable of extinction-level pandemics. The knowledge, equipment, and materials needed to engineer pathogens are more accessible than those needed to build nuclear weapons. And unlike other weapons, pathogens are self-replicating, allowing a small arsenal to become exponentially destructive. Pathogens have been [implicated](http://www3.interscience.wiley.com/journal/118564287/abstract) in the extinctions of many wild species. Although most pandemics "fade out" by reducing the density of susceptible populations, pathogens with wide host ranges in multiple species can reach even isolated individuals. The intentional or unintentional release of engineered pathogens with high transmissibility, latency, and lethality might be capable of causing human extinction. While such an event seems unlikely today, the likelihood may increase as biotechnologies continue to improve at a rate rivaling [Moore's Law](http://www.intel.com/technology/mooreslaw/index.htm). Farther out in time are technologies that remain theoretical but might be developed this century. Molecular nanotechnology could allow the creation of self-replicating machines capable of destroying the ecosystem. And advances in neuroscience and computation might enable improvements in cognition that accelerate the invention of new weapons. A survey at the Oxford conference found that concerns about human extinction were dominated by fears that new technologies would be misused. These emerging threats are especially challenging as they could become dangerous more quickly than past technologies, outpacing society's ability to control them. As H.G. Wells noted, "Human history becomes more and more a race between education and catastrophe." Such remote risks may seem academic in a world plagued by immediate problems, such as global poverty, HIV, and climate change. But as intimidating as these problems are, they do not threaten human existence. In [discussing](http://www.foreignaffairs.org/19831201faessay8351/carl-sagan/nuclear-war-and-climatic-catastrophe-some-policy-implications.html) the risk of nuclear winter, Carl Sagan emphasized the astronomical toll of human extinction: A nuclear war imperils all of our descendants, for as long as there will be humans. Even if the population remains static, with an average lifetime of the order of 100 years, over a typical time period for the biological evolution of a successful species (roughly ten million years), we are talking about some **500 trillion people yet to come**. By this criterion, the stakes are one million times greater for extinction than for the more modest nuclear wars that kill "only" hundreds of millions of people. There are many other possible measures of the potential loss--including culture and science, the evolutionary history of the planet, and the significance of the lives of all of our ancestors who contributed to the future of their descendants. Extinction is the undoing of the human enterprise. There is a **discontinuity between risks that threaten 10 percent or even 99 percent of humanity and those that threaten 100 percent**. For disasters killing less than all humanity, there is a good chance that the species could recover. If we value future human generations, then **reducing extinction risks should dominate our considerations**. Fortunately, most measures to reduce these risks also improve global security against a range of lesser catastrophes, and thus deserve support regardless of how much one worries about extinction. These measures include: Removing nuclear weapons from hair-trigger alert and further reducing their numbers; Placing safeguards on gene synthesis equipment to prevent synthesis of select pathogens; Improving our ability to respond to infectious diseases, including rapid disease surveillance, diagnosis, and control, as well as accelerated drug development; Funding research on asteroid detection and deflection, "hot spot" eruptions, methane hydrate deposits, and other catastrophic natural hazards; Monitoring developments in key disruptive technologies, such as nanotechnology and computational neuroscience, and developing international policies to reduce the risk of catastrophic accidents.