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SPECIAL REPORT

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Conflict-Sensitive Approach to Infrastructure Development

Summary

- Infrastructure development is the foundation of a sustainable economy and a means to achieving broader nation-building goals. Providing basic services is critical to security, governance, economic development, and social well-being.[2]
- U.S. military forces have improved planning and coordination mechanisms and have created doctrine, planning processes, and training exercises that are shared by all branches of the military. This type and level of coordination mechanism is necessary for civilian and military coordination, as well, and progress is starting to be made in this important area.
- The complexity of the Federal Acquisition Regulations (FAR) often results in missed opportunities to act quickly in restoring essential services. Contracting officers are often reluctant to take chances in expediting infrastructure contracts due to concerns about violating the FAR. Simplified contracting, use of smaller projects, and reach-back support are three ways to ensure fleeting opportunities are not lost.
- In conflict-sensitive environments, the condition of infrastructure is often a barometer of whether a society will slip further into violence or make a peaceful transition out of the conflict cycle. The rapid restoration of essential services, such as water, sanitation, and electricity, assists in the perception of a return to normalcy and contributes to the peace process.
- According to James I. Wasserstrom, head of the Office for Oversight of Publicly-Owned Enterprises (utilities) in the United Nations Mission in Kosovo, infrastructure adds "arms and legs" to strategies aimed at winning "hearts and minds." Infrastructure is fundamental to moving popular support away from prewar or during-conflict loyalties and to moving spoilers in favor of postwar political objectives.
- This U.S. Institute of Peace Special Report presents a model that links the infrastructure cycle with conflict analysis. This model is helpful to focus the attention of the infrastructure program planners and implementers on the conflict cycle. In many instances, infrastructure experts approach problems from an engineering perspective.

About the Report

This report is based on a series of consultations chaired by Merriam Mashatt, Major General Daniel Long, and James Crum under the auspices of the U.S. Institute of Peace Center of Innovation for Economies and Conflict. The Institute's Framework for Success[1] provided the organizational structure for the consultations. At the time the report was developed, Merriam Mashatt directed the Center, under the leadership of Daniel Serwer, vice president for Post-Conflict Peace and Stability Operations. Coauthors Major General Daniel Long and James Crum served as directors of the Department of the Army's Project and Contracting Office in Iraq and Washington, DC, respectively. Currently, Merriam Mashatt is the director of Reconstruction and Stabilization for the International Trade Administration, U.S. Department of Commerce; Major General Long is now the commander of the Joint Task Force Civil Support, U.S. Northern Command; and James Crum is a vice president at Van Scoyoc Associates, Inc. The authors thank James Wasserstrom and Colonel Michael Moon for their expert advice and Zoë Cooprider for her research support.

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Introduction

In conflict-prone environments, traditional forms of economic analysis and program development are insufficient to aid an economy's progress into a peaceful transition. The stated goals of traditional assistance are economic growth, efficiency, and competition. While these goals may be appropriate long-term economic objectives, they are not suitable for stabilizing an economy emerging from conflict. In countries where security is lacking, the goal of economic initiatives should be first and foremost to reduce conflict. It is important to recognize that economic stabilization is different from traditional economic development.

Stabilization must be achieved before development initiatives can take root. In general, the goal of postwar stability operations is to ensure that the threat (military and/or political) is reduced to a manageable level. Second, stability aims to ensure that the situation leading to the original crisis does not reoccur or its effects are mitigated.[3]

The most prominent example of not addressing economic stabilization is the U.S. intervention in Iraq in 2003. The U.S.-funded economic programs were focused on "market-driven" efficiency instead of conflict reduction, which would have significantly reduced conflict drivers. It is now clear that economic development could not effectively proceed without first achieving a minimum level of security.

How does economic stabilization in a conflict-prone environment differ from a traditional economic development environment? How can programs be modified to address true stabilization before moving on to economic development? To tackle these difficult questions, the United States Institute of Peace held a series of workshops in 2006 and 2007 to develop a new analytical model. The model uses a life-cycle approach to integrate economic considerations with conflict assessment. It also recommends a process to view the stages of economic assistance through the lens of conflict assessment.

As a starting point, the group applied this model to infrastructure development in conflict-prone environments.[4] The goal of the workshops was to generate best practices for developing conflict-sensitive approaches for each phase of an infrastructure life-cycle. The working group limited its discussions to circumstances where donors provided infrastructure assistance in a reconstruction and/or stabilization environment. Some of the countries discussed included Iraq, Afghanistan, Kosovo, Pakistan, and Sri Lanka.

Both the model and this report are organized based on the five life-cycle phases of an infrastructure project:

1. Assessment
2. Strategy, planning, and coordination
3. Building host nation legitimacy
4. Project execution
5. Transition of completed projects to host nation control

By viewing the phases of program development through the lens of conflict assessment, an infrastructure program can be designed to reduce drivers of conflict and support the peace process.

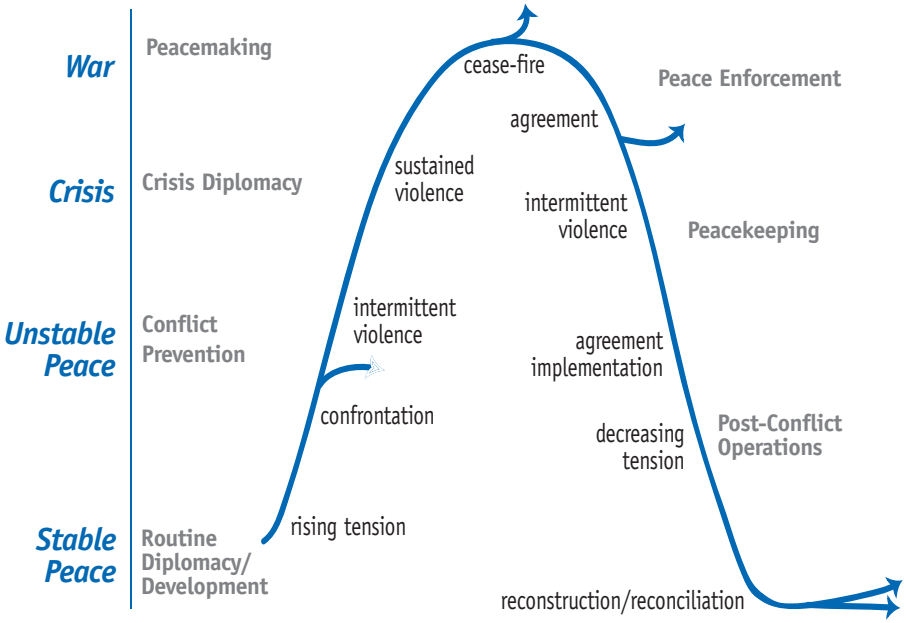
Infrastructure and Conflict Assessment Model

Experts in the diverse fields of infrastructure development and conflict assessment share a common analytical framework based on life-cycle analysis. Simply defined, a life-cycle is

the stages of a lifetime. An infrastructure project's life-cycle consists of designing, building, operating, and maintaining a facility, such as a water treatment plant. A conflict life-cycle generally consists of stable peace, rising tensions, violent conflict, reconciliation, and a return to stable peace. During 2006 and 2007, a series of United States Institute of Peace workshops used this common frame of reference to bring together experts in the fields of infrastructure development, conflict assessment, engineering, and policy analysis.

Stabilization must be achieved before development initiatives can take root.

Figure 1: Life-Cycle of a Conflict



Source: Modified from materials in *Preventing Violent Conflicts: A Strategy for Preventive Diplomacy*, by Michael S. Lund, USIP Press, 1996.

In order to view the infrastructure cycle through the lens of conflict analysis, the workshop series borrowed a model from *Preventing Violent Conflicts: A Strategy for Preventive Diplomacy* by Michael S. Lund.[5] His model emphasized the various phases of the conflict cycle and corresponding diplomatic efforts (see figure 1).

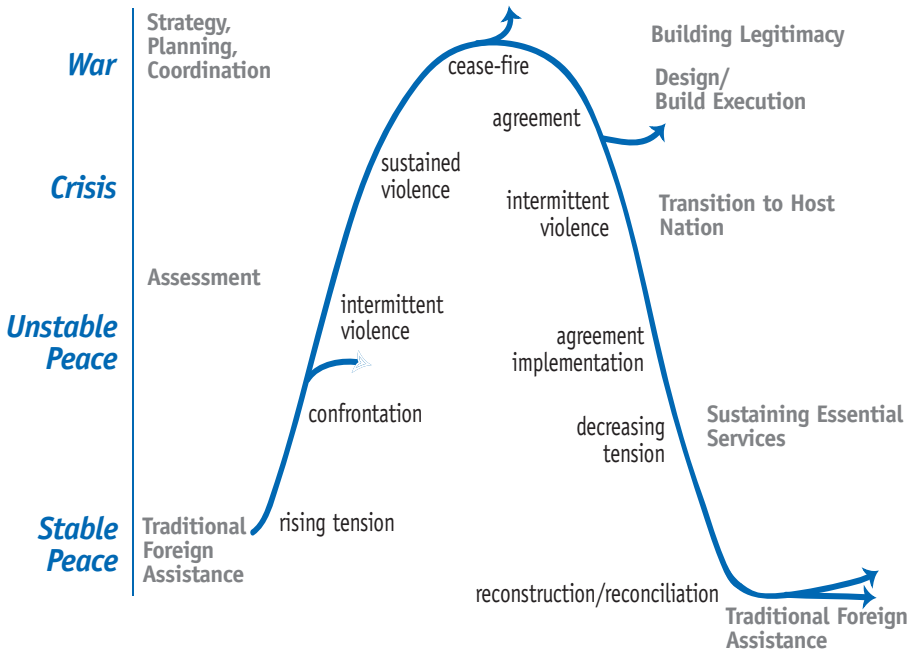
This simplified model represents an idealized conflict cycle. It is important to keep in mind that individual conflicts follow their own unique course. As Lund states, "Some double back on themselves, swinging from tenuous settlement to renewed conflict, as happened in Angola in the 1990s. Some never quite develop into full-fledged conflicts, but simmer uneasily for years, as happened in Indonesia before the outbreak of fighting over East Timor." This chart provides analysts with a useful means of understanding the dynamics of conflict and assessing what actions are appropriate to manage the conflict at its various stages.

The workshop members adapted this standard conflict model to incorporate the five major phases of infrastructure development in conflict prone settings: assessment, planning and coordination, building legitimacy, execution, and transition (see figure 2). When viewed through the lens of conflict analysis, a new set of priorities and concerns for infrastructure development emerges for each phase of the conflict cycle.

As might be expected, infrastructure experts frequently approach problems from an engineering perspective. While this view is important, it must be married with an appreciation of the conflict dynamic. Indeed, traditional engineering concerns, such as efficiency, are secondary in a conflict-sensitive approach. For example, it may be critical to the economic success of the host nation to forgo some efficiency in order to promote

Traditional engineering concerns are secondary in a conflict-sensitive approach.

Figure 2: Infrastructure Cycle and Conflict



Source: Modified from materials in *Preventing Violent Conflicts: A Strategy for Preventive Diplomacy*, Michael S. Lund, USIP Press, 1996.

indigenous job creation and employment of host nation contractors. This model helps focus the attention of the infrastructure program planners and implementers on the conflict cycle.

Discussion of Phases

Assessment

Assessing Drivers of Conflict. Many international interventions falter because early assessments do not address drivers of conflict, either those that operated in the past or new ones that emerge after a peace agreement is reached. While it may not be possible for interventions to eliminate all of the drivers of conflict, it is critical to be aware of them and, if necessary, have a strategy to work around these difficulties. In this report, drivers of conflict are defined as individuals and systems that benefit from perpetuating conflict, including

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- Illicit market activity
- Corrupt government officials
- Criminal syndicates (drugs, arms, human trade)
- Exploitation of natural resources in a way that benefits predatory elites
- Perpetuation of group-based inequities within the society
- Violent competition for resources
- Control of essential services to illegitimately benefit a small group

Key infrastructure planners and providers in conflict scenarios must know the underlying motives and causes for the original conflict, who controls the infrastructure, and how infrastructure development could inadvertently fuel conflict.

Ideally, this analysis of the conflict drivers will be informed by host nation officials who understand societal needs as well as their capacity to participate in and sustain what

is ultimately built. Assessments need to be ongoing through the life of the project and address the following issues in the host nation:

- The role infrastructure plays in perpetuating or mitigating host nation conflict
- Cultural traditions and practices that might impact infrastructure design and use
- Identification of who controls infrastructure and what motivates these stakeholders
- Identification of possible incentives for powerful stakeholders, such as cooperation, co-optation, or confrontation
- Illicit power structures and their impact on infrastructure
- Capacity of the host nation to sustain infrastructure
- Host-nation-appropriate technology and local systems
- Regional infrastructure arrangements with neighboring countries

One way to conduct this type of research is to compare notes with civil society organizations, as well as national and international nongovernmental organizations (NGOs), bilateral donors, and the United Nations. Many times, these organizations have maintained long-term operations in the field.[9] These are hardly impartial bodies, but using triangulation with the regional and/or technical expertise among the various sources should achieve a practicable approximation of facts on the ground.[10] Such an understanding of the operational environment will ensure that active choices are made leading to the appropriate planning of infrastructure development strategies, while simultaneously mitigating potential problems.[11]

Perhaps most important to remember is that assessments should take into consideration the local systems that developed to provide essential services that the national government could not or would not provide. These systems must be rehabilitated, replicated, and integrated into the national system or infrastructure. Integration, whether bottom-up or top-down, will bolster the capacity for economic growth and regional development. For example, prior to 2003, Iraq had a network of community and neighborhood electricity generators. Rather than trying to rebuild the electrical grid, it may have been a better approach to rehabilitate and strengthen this system.

Finally, regional infrastructure assessments are one aspect of the analysis that is frequently underappreciated. Regional integration of infrastructure leads to closer ties and cooperation between neighboring countries. Intervening authorities should also be aware of the assets and infrastructure capacities of countries that neighbor the host nation that have been severed or reduced. Once the immediate humanitarian needs are addressed, long-term infrastructure projects should set the stage for regional integration of national operating systems, such as electrical transmission/distribution, air traffic control, and water use rights.

Conflict Assessment Tools Relevant to Infrastructure Development

World Bank Conflict Analysis Framework:
http://go.worldbank.org/3QZPKY2XU0

United States Agency for International Development Conflict Assessment Tools:
http://rmportal.net/tools/conflict-assessment-and-management-tools

International Finance Corporation (IFC) Performance Standards:
http://ifc.org/ifcext/policyreview.nsf/ContentSafeguardPolicesUpdate

UN Global Compact Business Guide for Conflict Impact Assessment and Risk Management:
www.union-network.org/.../c550f48211dccaacc1256c31002013c5/$FILE/Business-Guide.pdf

Sri Lanka Mahaweli Irrigation Project: Ethnic Tensions Kill Project Mid-Stream

A classic example of infrastructure development fueling ethnic tensions is the Mahaweli water project in Sri Lanka. The project exacerbated preexisting ethnic tensions, which were well-known by the donor community at the time the project was conceived. In hindsight, a simple conflict assessment would have highlighted the difficulties and the impact of the project on the conflict cycle. The lack of a conflict-sensitive approach doomed the project from the start.

The project was designed in the late 1970s to dam, divert, and harness the Mahaweli Ganga River system in order to generate hydroelectric energy and irrigate 360,000 hectares of scrubland. Irrigating the barren land would make it possible to resettle up to 750,000 landless peasants on small farms.[6] The government of Sri Lanka was eager to relieve overcrowding in the Sinhalese-dominated south and southwest regions of the country.

The Tamils and the Sinhalese disputed who had rights to the territory. The Tamils viewed the plan as a scheme to use the resettlement to undercut their land claims in the eastern province. They believed the project was a continuation of colonization schemes that had changed the ethnic make-up of the land once dominated by the Tamils.

For example, in 1976 the Tamils said, "a system of planned and state-aided colonization was calculated to make the Tamils a minority in their own homeland."[7] The data support this assertion because in 1946 Sinhalese made up slightly more than 19 percent of the population in the Eastern dry zone and by 1976 the Sinhalese population grew to 86 percent.[8]

In the end, armed conflict broke out and the dispute over resettlement ratios sounded the death knell for the project. By the late 1980s the project was a white elephant with reservoirs lying dormant, and by March 1990 the World Bank ultimately pulled out of the project altogether.

Summary of the World Bank Conflict Analysis Framework

The Conflict Analysis Framework (CAF) is designed to help World Bank (WB) teams identify factors that affect a conflict and enable them to see how they can be best addressed through WB programs and policies. The analysis is designed to ensure that development interventions do not incite, exacerbate, or revive conflict. The CAF has four major components.

Risk Screening Process. The screening process comprises a review of nine indicators. In general, the more indicators assessed as positive, the more need there is for conflict analysis.

Nine Risk Screening Indicators

1. Violent conflict in the past ten years 2. Low per capita GNI 3. High capacity on primary commodities exports 4. Political instability	5. Militarization 6. Ethnic dominance 7. Active regional conflicts 8. High youth unemployment 9. Restricted civil and political rights

Conflict Analysis. The conflict analysis is based on a framework of six categories, each of which has a number of variables. Using the framework, WB teams are able to identify the key factors that affect conflict.

Six Conflict Categories

1. Social and ethnic relations 2. Governance and political institutions 3. Human rights and security	4. Economic structures and performance (including infrastructure) 5. Environmental and natural resources 6. External factors

Methodology. CAF recommends a five-step process for teams to work through conflict-related issues.

Five Steps

1. Conduct a desk study of available information 2. Conduct workshops with country specialists and subject matter experts to cover all six categories	3. Conduct follow-up studies on issues identified in the workshops 4. Conduct country consultations with stakeholder groups 5. Hold concluding workshops to integrate findings and incorporate within country strategies

Analysis. As part of the analysis of each category, the approach suggests focusing on seven aspects for each category.

Seven Aspects

1. Its history and how it developed over time 2. Its dynamic and trends and what is determining the future path 3. Public perceptions and biases of the issue 4. How the issue has been politicized	5. Extent to which the issue has led to organized interests 6. How it contributes to conflict and intensity 7. How it contributes to poverty

Planning and Coordination

Infrastructure alone will not bring about stability. It is critical that those involved in the planning process view infrastructure as a means to achieving the larger end-states essential for societies emerging from conflict. Infrastructure underpins all of the USIP Framework for Success pillars, including: rule of law, security, sustainable economy, and governance. Providing basic services is critical to security, governance, economic development, and social well-being.[12] For example, the construction of courthouses and prisons underpin rule of law; border facilities and military bases impact national security; building schools, hospitals, and clinics address social welfare; roads and electricity support the economy; and clean water is critical to every aspect of society.

Providing basic services is critical to security, governance, economic development, and social well-being.

In traditional development scenarios where the security situation is permissive, the host nation would ideally have a well-thought-out, strategic infrastructure plan where donors contribute by filling the gaps. This is true in many Millennium Challenge Corporation projects, where host nations seek assistance with long-term development projects. In many conflict-prone environments, however, an infrastructure plan does not exist and country needs are overwhelming. The phrase, "we need everything," is very common in many countries, so it is difficult to determine where to start. In these cases, it is critical to build capacity within the host nation to drive the strategic and planning process. Undoubtedly, building a strategy based on host nation input and buy-in takes time, but, in the long run, the projects are more appropriate and thus more sustainable, which is more thoroughly discussed in the section "Build and Maintain Legitimacy."

Who is in Charge? One of the major stumbling blocks to effective planning and coordination in conflict-prone environments is a lack of a clear understanding by all players as to who exactly is in charge. While there is widespread agreement that civilians should lead economic stabilization and recovery efforts, this may not be possible in conflict settings. The reality is that the military is presently the only part of the U.S. government that has the significant capacity needed to respond immediately to reconstruction in nonpermissive security environments. The tension lies in the fact that the military lacks the expertise on the economic front, while the civilians lack the ability to operate effectively in nonsecure environments. According to Ambassador Robert Oakley:

> [W]hen there is a lack of enthusiasm to involve the military, there may be no alternative other than inaction. The military is called upon too frequently because it is too easy, and … not enough has been done to develop greater civilian capabilities.[13]

What causes even greater confusion is that the lead for coordination shifts as the security environment changes. As security improves, civilians and host nation government officials rightly take the lead. When security worsens, the lead shifts to the military. Recognizing and responding to the transition between who leads and who follows is not always clear or well understood.

The lead for coordination shifts as the security environment changes.

Another complication is that international interventions involve numerous civilian and military organizations leading to a confusing mix of personnel, organizational objectives, and command-and-control relationships. The array of actors includes governmental officials, international governmental organizations (IGOs), regional organizations, NGOs, and private sector companies. A lack of trust between organizations can develop due to stovepiped operations and turf battles. Not only does this situation lead to a duplication of effort, it prevents leveraging synergies between different efforts.

In a worst-case scenario, a lack of cooperation between organizations may result in harmful effects. This was the case with the U.S. Department of Defense Commander's Emergency Response Program in Afghanistan, which the NGO community said did not coordinate infrastructure work with local stakeholders. Additionally, NGO representatives said some of the completed projects, such as schools, did not take sustainability into account. Detractors were also concerned with the potential for confusion among local stakeholders between civilian and military aid.[14]

Examples of Improved Coordination. U.S. military forces have improved planning and coordination mechanisms and have created—through Joint Forces programs—doctrine, planning processes, and training exercises that are shared by all branches of the military. This type and level of coordination mechanism does not yet exist among civilian groups or between civilian and military agencies.

Some progress, however, is being made in civilian and military coordination. First, The U.S. Agency for International Development (USAID) and the U.S. Army Corps of Engineers (USACE), the two U.S. government entities most heavily involved in infrastructure development in conflict-prone environments, are working to improve coordination. Examples of recent concrete steps these organizations have implemented include:

- The Commander of USACE and the Administrator of USAID have agreed to pursue mechanisms that will allow USACE to immediately respond to USAID requests for assistance, and to work out arrangements to station a USACE Liaison Officer within USAID headquarters.
- USACE is procuring additional rapid response contracts that facilitate faster initiation of reconstruction following contingencies. These contracts will support USAID missions in future efforts.
- USACE has offered to form a formal contingency and engineering support planning relationship with USAID.

Second, the State Department's Coordinator for Stability and Reconstruction (S/CRS) is beginning to make progress in developing better interagency coordination mechanisms. The S/CRS leads the U.S. planning efforts for countries and regions of concern and coordinates the deployment of U.S. civilian resources to respond to conflict. The initiative is designed to create an Interagency Management System (IMS) staffed by civilians from both government and the private sector.

One of the major goals behind the development of the IMS is the ability to ramp up civilian capacity for nation-building efforts. For example, S/CRS is working to create an internal surge capacity of civilian response teams within the U.S. government that would be deployable to conflict-sensitive areas. S/CRS is also accelerating plans for a civilian reserve corps modeled on the military reserve. According to the head of S/CRS, Ambassador Herbst, the civilian reserve is envisioned to be comprised of civilians who sign up for reserve status for three to five years and perform their civilian jobs but train as a team from time to time. The reservists will commit to serve from six to twelve months abroad at any time. As we go to press, Congress has not yet authorized the civilian reserve, but it appears that prospects for it are improving.[15]

In addition to the IMS effort, the United States should consider implementing a U.S. government International Emergency Response Plan.

In addition to the IMS effort, the United States should consider implementing a U.S. government International Emergency Response Plan (IERP). An IERP would address several critical needs and lessons that continue to repeat themselves in previous post-war reconstruction events. Additionally, an IERP would build upon the successful features of the U.S. government domestic National Response Plan (NRP) and customize this concept for international response. [16,17]

Currently, the NRP only responds to domestic incidents. This report recommends adopting such a framework for international events. The American Red Cross' IERP is a good model for the U.S. government to follow. The American Red Cross works with a worldwide network of partners that includes the International Federation of Red Cross and Red Crescent Societies, the International Committee of the Red Cross, and 185 Red Cross and Red Crescent national societies to ensure consistency in international disaster response operations. The network's emergency response activities are community-based and large-scale. They focus on relief supply distribution including food, shelter, sanitation services, and reestablishment of family links.[18]

The creation of a U.S. IERP would align federal coordination structures, capabilities, and resources into a unified approach to international conflict management. The approach would tie together a complete spectrum of international conflict management activities

including humanitarian response, security, governance, rule of law, economic development, and social well-being. Since all of these activities have an infrastructure component, this type of coordination would greatly enhance the effectiveness of assistance overall.

For example, in the area of security, better coordination would result in not only building border forts, but training indigenous persons to staff them. In social well-being areas, better coordination would translate into ensuring that the schools and hospitals that are constructed have the staff necessary to provide education and health-care services.

In addition to more effective assistance, an IERP would create joint planning and relationship building throughout the entire stabilization process. Creating robust, integrated plans and contingencies will have the secondary, but equally important, effect of "familiarizing those involved with general parameters of the situation and with each other, making it easier to adapt and to coordinate efforts on the ground."[19] Other useful models for constructing the IERP are: the Federal Disaster Response Plan, the Humanitarian Information Unit within the U.S. Department of State's Bureau of Intelligence and Research, the International Committee of the Red Cross, the Sovereign Military Order of Malta's Malteser International, and the Foreign Disaster Emergency Relief Assistance.

The IERP would be structured in a life-cycle management model similar to the NRP. That is, the U.S. agencies would integrate their efforts from preplanning to response to long-term stabilization, and, eventually, to lessons learned. In the planning phase, it is important to identify the agencies, private companies, and organizations that have the capacity to be called upon for specific tasks such as security, rule of law, economic, and other reconstruction needs. Bringing everyone to the same planning table establishes a foundation for effective joint efforts.

U.S. agencies would integrate their efforts from preplanning to response to long-term stabilization, and, eventually, to lessons learned.

Finally, establishing roles, authorities, and up-front funding creates a pretrained, prepared, resourced team that knows the challenges of reconstruction and stabilization. This approach also generates commitment from potentially all U.S. agencies that have value and skills to offer in an international response effort. This better positions the United States to uniformly engage with international stabilization and recovery efforts.

Build and Maintain Legitimacy

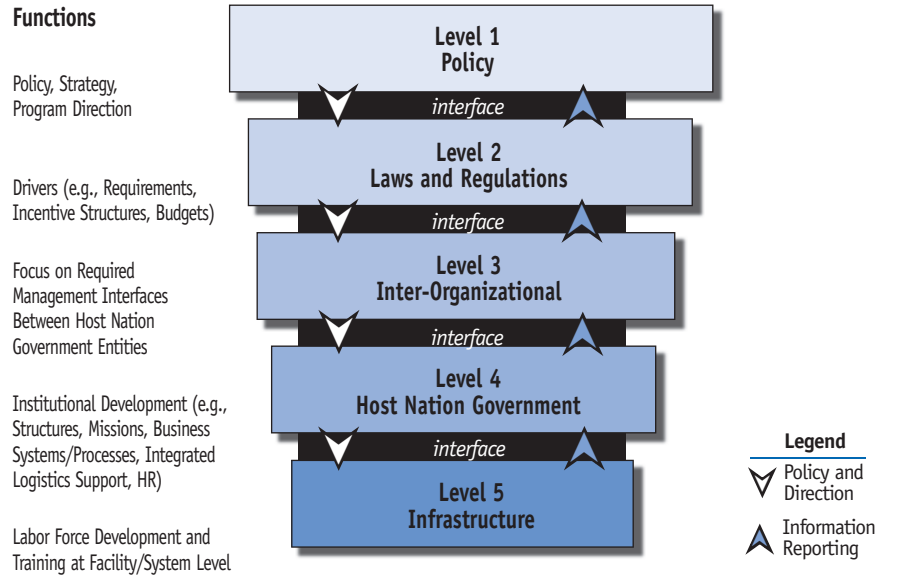
Historically, the World Bank and other development organizations have been criticized for leaving a trail of "unproductive, wasteful infrastructure projects."[20] Critics argued that large infrastructure investments did not translate into sustained service improvements and had harmful social impacts.[21] One of the primary reasons for these failures is the lack of host nation capacity and willpower to sustain what was built (see "Build-Neglect-Rebuild: Pakistan's Water Infrastructure" on page 19).

It is important to recognize that building legitimacy is a long-term endeavor requiring capacity development at all levels of the host nation government. Legitimacy is not an isolated objective because it permeates all aspects of host nation development. It will arise naturally if the host nation adopts practices that will enable the state to meet the needs and aspirations of its people. Trying to shoehorn legitimacy where it is not earned, however, empowers illegitimate rulers and wastes donor efforts by supporting bad governments.

Because these endeavors are long term, they demand significant financial and political commitment by donors and the host nation. Moreover, donors must adjust expectations based on the long-term nature of building capacity. Difficulties arise when donor fatigue develops after about three years. Donors become weary of tackling long-term problems with few results and are eager to redirect funding to newer international crises with high visibility and greater rewards.

While it may only take several years to finish the bricks-and-mortar component of an infrastructure program, it can take several decades to develop the institutional capacity needed to ensure appropriate operations and maintenance, as well as fair distribution of essential services.

Figure 3: Five Levels of Capacity Development



Source: U.S. Department of the Army, "Project and Contracting Office Report on Iraq Reconstruction, Historical Booklet," updated May 1, 2007, 17.

Level 1—Policy: establish the strategic policy, vision, and commitment at the highest levels of the host nation government to enable, facilitate, and promote a sustainable, national infrastructure framework. The ultimate goal of the policy is that infrastructure benefits will be distributed fairly and drivers of conflict reduced.

Level 2—Laws and Regulations: establish drivers and requirements to support sustainable infrastructure. Put in place safeguards to ensure illicit power structures or other spoilers do not capture that nation's infrastructure. Safeguards include international oversight, transparent procurement processes, and effective billing and collection mechanisms.

Level 3—Interorganizational: develop and institute systems and processes by which all public and private sector stakeholders work to create sustainable infrastructure. Develop civil society organizations that demand governmental accountability and fair distribution of essential services.

Level 4—Host Nation Government: establish functional business and organizational systems within each ministry or sector necessary to support sustainable infrastructure. Ensure that each sector—water, electricity, health care, and education—has a national strategy and that all regions of the country are treated fairly. Establish transparency and anticorruption mechanisms. Address implementation issues at the local level, for example, ensure that hospitals have beds and schools have desks.

Level 5—Infrastructure: provide targeted training and mentoring to host nation staff operating at the plant/facility level. If needed, provide a financial bridging strategy to conduct operations and maintenance on completed projects until the host nation is able to sustain the facilities.

Essential Components to Building Legitimacy. Figure 3 depicts the various levels of capacity development and the parties responsible for each level.

Most of the lessons learned while building and maintaining legitimacy state the obvious: host nation involvement is necessary for success. This is true during every phase of the reconstruction effort from short-term, small-scale, immediate-impact projects to long-term, large-scale facilities. Additionally, it is critical to receive buy-in from every level of leadership, from the local tribal leader to the head of the ministry in charge of

It is critical to receive buy-in from every level of leadership.

the national strategy. Without this host nation involvement and buy-in, projects are likely to fail after being transitioned to host nation control

An integrated capacity development plan within the host nation should focus on the five levels shown in figure 3: policy, laws and regulations, inter-organizational, host nation government, and infrastructure. All of these capacity development activities must take place concurrently, be integrated, and build upon one another.

It is not enough to provide training at the facility level (Level 5) in fragile states to ensure essential services are provided. The Iraqi electrical sector is a good example of how all of these levels of capacity development are interrelated. Iraqi policies (Level 1) that subsidized the provision of electricity were preventing the Ministry of Electricity from collecting fees that could later be reinvested into infrastructure sustainability (Level 5).

In addition, subsidies strained the electrical system by creating skyrocketing demand as electronics imports flooded the Iraqi market and were free to operate in Iraqi homes (Levels 1, 2, and 5). Moreover, the Iraqi Ministries of Planning, Electricity, and Oil (Level 3) strained to coordinate with one another to create an Iraqi national energy strategy that would guarantee appropriate fuel supplies to the Ministry of Electricity. The Ministry of Finance and all of the other essential services ministries (Level 3) had great difficulty coordinating and planning for proper asset management, such as operations and maintenance of facilities. If any one of these links in the chain failed, electricity might not be able to be provided.

Execution

During the consultations to develop this report, participants viewed contracting impediments as the primary stumbling block to effective execution of infrastructure programs. The complexity of the FAR combined with the risk-averse nature of contracting officers often result in missed opportunities to act quickly in restoring essential services. Contracting officers are often reluctant to take chances in expediting infrastructure contracts due to concerns about violating the FAR. This concern stems from a lack of understanding of the flexibilities in the FAR as it relates to contingency environments.

Contracting officers are often reluctant to take chances in expediting infrastructure contracts due to concerns about the FAR.

Simplified Contracting. Since there is already a full body of literature on contracting in conflict environments,[22] the discussion on contracting in this section is limited to a brief update on the Department of Defense's (DOD's) recent efforts to simplify contracting for executors on the ground. The U.S. Air Force has taken the lead in addressing this problem. For example, DOD published an interim FAR rule that revises FAR Part 18 to give one reference to the acquisition flexibilities already available in contingency environments. In addition, this rule expedites acquisitions of supplies and services during all types of emergencies. The Air Force Logistics Management Agency has produced a pocket guide FAR for use in the field. More work needs to be done to train implementers in the field and to provide reachback support for quick answers to difficult contracting questions.

Smaller Projects More Successful in Conflict Environment. Smaller projects seem to be executed more successfully than larger projects in conflict-prone environments. The lessons from the Iraq reconstruction program indicate that in nonpermissive environments, smaller, high-impact projects implemented by local construction companies can be preferable in meeting immediate and localized stability goals.[23] The Commander's Emergency Response Program, which involves investment of money at the local level by senior commanders, proved the value of relatively small, rapidly executable projects that meet immediate local needs and, thereby, have the effect of enhancing relations with local communities.[24]

Larger, more complex, projects, which may be perfectly rational in a permissive security environment, are not ideal in conflict-prone host nations. These projects are harder to protect and take longer to reap the tangible peace dividends necessary to win the hearts and minds of the general population. Also, it is much more difficult to find local construc-

tion companies possessing the expertise and capacity to construct complex facilities using the latest technology.

Reachback support is any service performed, generally stateside on behalf of the forward-deployed group.

Reachback Support. Another important, but often overlooked, aspect of execution is the benefit of reachback support. Reachback support is any service performed, generally stateside and often in the United States, on behalf of the forward deployed group. For infrastructure initiatives, the key is to establish a seamless virtual team that, although separated by thousands of miles, uses a team approach. Reachback support adds great value by taking the burden off the forward team. Under this structure, management identifies the tasks that must be accomplished within the host country and those tasks that can be performed stateside, where it is easier to operate.

For example, a reachback office in the United States can draft program plans, conduct congressional testimony, communicate with interagency partners, conduct fast turnaround research, respond to public inquires, and develop and maintain the Web site. The reachback support system requires metrics for performance and for setting expectations on capabilities and deliverables. Such a management structure enables greater information sharing and servicing of the stateside customers, while reducing the workload of the forward team.

In addition to establishing dedicated staff in the stateside reachback offices, a virtual team of infrastructure experts could also be created. The International Network to Promote the Rule of Law (INPROL) maintained by the Institute is an example of such a network in the legal field.

The aim of INPROL is to assist international rule of law specialists in their efforts to prevent conflict and stabilize war-torn societies. An Internet-based knowledge network, INPROL provides those in the field with the ability to exchange information with other experienced practitioners and experts and to access relevant documents, best practices, and related materials, thus turning lessons learned into lessons applied.

The same type of system could be developed for infrastructure experts. Collecting, disseminating, and implementing best practices related to infrastructure development in conflict-prone environments are critical to success. Currently, there is no comprehensive program to convey best practices to U.S. government staff deployed in the field.

The cornerstone of this type of system would be a consortium of practitioners joined together to promote infrastructure sustainability in conflict-prone environments. Providing access to a network of experts, a high-quality information database, and virtual training will significantly improve the performance of field-based personnel and will also greatly contribute to the establishment of institutional memory within the U.S. government.

Transition

In conflict-sensitive environments, the condition of infrastructure is often a barometer of whether a society will slip further into violence or make a peaceful transition out of the conflict cycle. The rapid restoration of essential services—such as water, sanitation, and electricity—assists in the perception of a return to normalcy and contributes to the peace process. According to James I. Wasserstrom, head of the Office for Oversight of Publicly-Owned Enterprises (utilities) in the United Nations Mission in Kosovo, infrastructure adds "arms and legs" to strategies aimed at winning "hearts and minds." It is fundamental to moving popular support away from pre-conflict or during-conflict loyalties and to moving spoilers in favor of post-war political objectives.

Transitioning an infrastructure program from one lead donor agency to another or to the host nation is much more complex than setting a date to turn over the keys to the facility. The security environment, progress on indigenous institutional capacity, and the public's perception of essential services all impact the transition process. Two of the most important milestones that must be reached are effective means to deal with "spoilers" and managing the public's expectations.

Cooperation with a spoiler may elicit a faster return of basic services than other tools.

Dealing with Spoilers and Implementing Safeguards. Spoilers are defined as individuals and organizations that believe peace threatens their power, worldview, and interest.

In general, they seek to undermine attempts to achieve peace. In a worst-case scenario, there is a danger that those who have a stake in perpetuating conflict could capture newly constructed assets and related revenues. For example, workers at the Kosovo Electro-energy Corporation (KEK), many of whom were demobilized Kosovo Liberation Army soldiers, were providing contributions in the form of payroll deductions from their KEK salaries to "benevolent" organizations, which were, themselves, likely conduits of funds to those advocating the return to violent means to achieve Kosovo's independence.

According to Wasserstrom, where infrastructure or restoration of key basic services is controlled by spoilers, the three "C's" co-exist as tools: cooperation, cooptation, and confrontation. Each entails risks and rewards and can be analyzed accordingly during the assessment phase.

Cooperation with a spoiler may elicit a faster return of basic services than other tools. The obvious risk is legitimization in the eye of the public of a past or prospective enemy of the political process, which taints public perception of the international community. On the other hand, cooperation can lead to cooptation, where spoilers may join a political process they might not otherwise have due to the enticement of material rewards, such as revenues from providing infrastructure service. The risk is that enriched spoilers joining the political process have a high chance of corrupting it down the road, since the source of their power is probably not legitimate.

Confrontation can be very popular, politically, if those being confronted are negatively perceived by the community and can thus be dislodged from control. However, it can be highly risky and costly if spoilers merely go underground to undermine reconstruction through covert "hearts and minds, arms and legs" strategies or more aggressive political/military approaches of their own.

In short, each tool has value, either in terms of getting the actual work done, winning popular support, or both. The value depends on the relationships between locals who control, or attempt to control, infrastructure reconstruction resources, the community the infrastructure serves, and those arriving to manage conflict reconstruction and stabilization. Part of the plan developed in conjunction with the assessment mentioned above will include an evaluation of the utility of tools at hand, risks and rewards, and ways to optimize available means, based on the specifics of the local context.

Clear safeguards should be implemented to protect assets from falling into the hands of spoilers who benefit from continuation of conflict.[25] Safeguards are generally laws, regulations, and formal procedures implemented by the donor community or the host nation government to protect public goods. Balancing the urgency of reconstruction with the time needed to ensure transparency and accountability is a difficult task. However, it is crucial to the task of preventing the capture of reconstruction processes by some factions or their proxies who seek to perpetuate conflict. Some examples of safeguards include

- International oversight
- Transparent procurement processes
- Auditing and enforcement of violations
- Mechanisms for the public to register complaints against utilities
- Commercializing business
- Proactive and real-time oversight of public utilities—state-owned enterprises (SOEs)
- Effective billing and collection mechanisms
- Establishing board of directors

One example of a safeguard applies to the job description review process within a public utility in the host nation. It is critical to ensure that the job descriptions of key positions in the utility, such as the president, vice president, chief financial officer, and recruitment are transparent and above board. Rather than department heads drawing up the lists of tasks and jobs within the department, the lists should be drawn up by a task

Milestones for Giving Control of Completed Facility to Host Nation

Below, key transition milestones are summarized as reconstruction operations shift from donor agencies to the host nation. If these milestones are not met, the effort may be compromised.

Security

- People feel secure and the environment is mostly permissive
- Critical essential services facilities are protected
- There is security at the infrastructure facility to prevent spoilers from sabotaging operations and maintenance (O&M)

Public Perception

- Emergency humanitarian needs meet regionally determined standards
- Fair distribution of essential services across the population
- Indicators of social equality and cohesion are present and there is a power-sharing system to ensure minority inclusion
- Public complaints about the system are addressed fairly
- Safeguards are in place to prevent infrastructure from reverting back to drivers of conflict (such as real-time oversight, payroll controls, and boards of directors)
- Public is willing to pay for services to support infrastructure

Institutional Capacity

- There is consistency in host nation ability to plan, coordinate, and cooperate with donors
- Government is relatively stable and represents the interests of the local population
- Host nation has been trained in and accepts ownership of infrastructure sustainment plan
- Governance structures are capable of execution, finance ministry and essential services ministries are conducting joint planning for O&M funding

(continued on p. 14)

(continued from p. 13)

- There is a functional budget process
- Public trusts essential service providers to distribute benefits fairly

Infrastructure

- Output of built infrastructure is at a determined level (e.g., meets regional standards)
- Host nation provision of O&M is effective

force answerable to the director of the utility and supervised by the donor community. This list will serve as the basis for controlling employment. Also, to operate essential services utilities in a manner that fosters improved social well-being, the host nation, with the assistance of the intervening authority, should create managerial and corporate incentives within utility operations.[26]

Managing Expectations as Program Transitions between Various Phases. Establishing local and international support for infrastructure projects through the use of legitimate and effective communication strategies is critical for success. This requires a clear message that defines the goals of the infrastructure effort, as well as its limitations. The strategy must spell out the requirements of the mission in terms of resources, time frames, and risks involved. The message must set limited objectives that can be achieved in a timely manner, ensuring initial short-term successes upon which to build larger and more difficult goals.[27]

Within the host nation, the arrival of donors in response to a crisis leads to increased, often unrealistic, expectations among local population about the standards, quality, and quantity of infrastructure to be provided. Donors often fuel this hope by promising to deliver immediate and dramatic improvements. Unrealistic expectations within the host nation jeopardizes the legitimacy of the reconstruction effort.[28]

For example, because the Iraq Coalition Provisional Authority (CPA) promised to quickly exceed, rather than simply restore, pre-war production, its many accomplishments were often seen as failures.[29] Setting unrealistic goals up-front led to repeated comparisons between what the coalition promised—such as electricity, water, and schools—and what it delivered, consequently obscuring the genuine progress being made.[30] The CPA found itself constantly on the defensive.

While genuine progress was made,[31] infrastructure success has been overshadowed by disappointment about unmet expectations. Today, polls in Iraq reflect frustration about unmet U.S. promises to provide essential services.

As an infrastructure program transitions between various phases, the communications strategy must clearly communicate priorities to inform realistic expectations.

As an infrastructure program transitions between various phases, the communications strategy must clearly communicate priorities to inform realistic expectations. The communications strategy must seek to manage expectations in both the host nation and donor countries. At the host nation level, the strategic communications plan must be geared toward the various phases of the conflict. In the short term, expectations should be set toward providing immediate humanitarian needs and fixing essential facilities damaged during conflict.

Within donor nations, infrastructure development should not be viewed as a silver bullet to providing stability, but rather as a means to help the host nation begin to recover. Policymakers, congress, and the general population need to be educated about the true cost of the infrastructure, time requirements, and potential risks. To remain effective, these expectations must be adjusted to reflect the reality on the ground while avoiding unreachable promises to prevent cultivating disappointment.[32]

Summary of Recommendations

A conflict-sensitive approach to infrastructure development begins with viewing the five key phases of program development through the lens of conflict analysis. In doing so, a program can be designed to enhance stabilization by reducing drivers of conflict and supporting the peace process. At the very least, adopting a conflict sensitive approach will help to ensure that infrastructure development does not incite or revive conflict.

Assessment

Establish a robust conflict analysis mechanism to inform infrastructure strategy and planning. Analysis should address key issues such as an identification of who controls

infrastructure and what motivates these stakeholders. The following questions should be answered: Do they support the peace process or do they have a stake in continued conflict? Will they cooperate freely or will cooptation or confrontation be required? What is the capacity of the host nation to sustain infrastructure? What is the potential for sabotaging operations and maintenance by spoilers? Identify how infrastructure supports regional and global integration.

Planning and Coordination

Reduce confusion by establishing a clear leader throughout the various phases of the conflict cycle. Congress should fully resource the U.S. State Department's efforts to create an Interagency Management System (IMS). Once the IMS is operational, consideration should be given to develop an International Emergency Response Plan akin to the National Emergency Response Plan.

Build and Maintain Legitimacy

Create a fully integrated and resourced capacity development plan within the host nation at the following levels: policy, laws and regulations, inter-organizational, host nation government, and infrastructure.

Execution

Establish a strong reachback capacity, creating seamless virtual teams. Small, community-driven infrastructure projects implemented by local firms are preferable to large-scale projects. Link short-term initiatives to long-term development strategy.

Transition Planning

Set goals to meet critical transition milestones in security, institutional capacity, and public perception at the beginning of an infrastructure program. Implement safeguards to protect facilities after transition, including real-time oversight and transparent bidding procedures. If needed, implement a donor-funded bridging strategy to ensure proper operations and maintenance until the host nation is able and willing to take full control.

Notes

1. Daniel Serwer and Patricia Thomson, "A Framework for Success: International Interventions in Societies Emerging from Conflict," in *Leashing the Dogs of War: Conflict Management in a Divided World*, Chester A. Crocker, Fen Osler Hampson, and Pamela Aall (editors) (Washington, DC: United States Institute of Peace Press, 2007), 371.

2. Broad nation-building goals such as security, governance, and social well-being are beyond the scope of this paper.

3. The Department of Defense defines the stabilization phase as the phase required when there is limited or no functioning, legitimate civil governing entity present. The joint force may be required to perform limited local governance, integrating the efforts of other supporting/contributing multinational, other government agencies, international governmental organizations, or nongovernmental organization (NGO) participants until legitimate local entities are functioning. This includes providing or assisting in the provision of basic services to the population.

   The stabilization phase is typically characterized by a change from sustained combat operations to stability operations. Stability operations are necessary to ensure that the threat (military and/or political) is reduced to a manageable level that can be controlled by the potential civil authority or, in noncombat situations, to ensure that the situation leading to the original crisis does not reoccur or its effects are mitigated. Redeployment operations may begin during this phase and should be identified as early as possible. Throughout this segment, the joint force commander continuously assesses the impact of current operations on the ability to transfer overall regional authority to a legitimate civil entity, which marks the end of the phase. See Department of Defense Joint Publication 03, September 17, 2006, 26–27.

4. Infrastructure is defined as the basic facilities, systems (e.g. transportation and communications systems, water and power lines), installations (e.g. military installations), public institutions (e.g., schools, post offices, prisons), and associated capital equipment considered essential for enabling productivity in a country's or community's economy. This definition also includes means to sustain the infrastructure. Sustainability is a planned end-state that can be achieved through proper operations and maintenance and capacity development activities.

5. Michael Lund, *Preventing Violent Conflicts: A Strategy for Preventive Diplomacy* (Washington, DC: United States Institute of Peace Press, 1998).

6. Robert Miller, *Aid as Peacemaker: Canadian Development Assistance and the Third World Conflict* (Canada, McGill-Queen's Press, 1992), 53.

7. Milton Jacob and Ronald J. Herring, *Carrots, Sticks and Ethnic Conflict: Rethinking Development Assistance* (University of Michigan Press, 2003), 150.

8. Ibid.

9. Mott MacDonald, "Provision of Infrastructure in Post Conflict Situations," (London, UK Department for International Development, June 2005), 8.

10. The use of three or more sources or types of information to verify and substantiate an assessment.

11. MacDonald, 8.

12. Broad nation-building goals such as security, governance, and social well-being are beyond the scope of this paper.

13. Robert Oakley, "Opening Remarks to National Defense University Symposium on Civil–Military Cooperation," 2001.

14. Robert N. Perito, "The U.S. Experience with Provincial Reconstruction Teams in Afghanistan: Lessons Identified," United States Institute of Peace Special Report, No. 12 (Washington, DC: United States Institute of Peace Press, October 2005).

15. Beth Cole and Christina Parajon, "Nation Building: We CAN Do Better," USIPeace Briefing, March 2007.

16. The U.S. government's National Response Plan establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. For example, the NRP was implemented during Hurricane Katrina along the Gulf Coast and most recently to respond to wildfires in California. It forms the basis of how the federal government coordinates with state and local governments and the private sector during incidents.

17. See Homeland Security Presidential Directive (HSPD)-5 http://www.whitehouse.gov/news/releases/2003/03/20030228-9.html, November 2007.

18. See http://www.redcross.org/services/intl/0,1082,0_443_,00.html, November 2007.

19. "Infrastructure Reconstruction: An Imperative for Peace and Development Workshop," Dwight D. Eisenhower National Security Series, May 17–18, 2006, Washington, DC: Center for Strategic and International Security.

20. World Bank, *Infrastructure at the Crossroads: Best Practices from 20 Years of World Bank Experience* (Washington, DC: World Bank, 2006), xv.

21. Ibid, 1–2.

22. See Office of the Special Inspector General for Iraq Reconstruction. "Iraq Reconstruction: Lessons in Contracting and Procurement," Lessons Learned Initiative, Report No. 2 (Office of the Special Inspector General for Iraq Reconstruction, July 2006), 95–97.

23. Ibid, 94–95.

24. Ibid, 94.

25. Zoë Cooprider, Merriam Mashatt, and James Wasserstrom, "State-Owned Enterprises: Post-Conflict Political Economy Considerations," USIPeace Briefing, March 2007.

26. *Building* (Rand Nation Security Research Division, 2007), 279.

27. "Infrastructure Reconstruction: An Imperative for Peace and Development."

28. Anne Ellen Henderson, "The Coalition Provisional Authority's Experience with Economic Reconstruction in Iraq: Best Practices Identified," (Special Report, No. 138 (Washington, DC: United States Institute of Peace Press, April 2005).

29. Robert Looney, "The Economics of Iraqi Reconstruction," (Center for Contemporary Conflict, Naval Postgraduate School. *Strategic Insights*, Volume V, Issue 5, May, 2006).

30. Henderson.

31. United States Department of the Army, "Project and Contracting Office Report on Iraq Reconstruction, Historical Booklet," updated May 1, 2007, 17.

32. "Infrastructure Reconstruction: An Imperative for Peace and Development."

33. Peter Bosshard and Shannon Lawrence, "Pakistan's Rot Has World Bank Roots," *Far Eastern Economic Review*, May 2006, 41.

34. Ibid, 40–41

35. Ibid, 42

Build-Neglect-Rebuild: Pakistan's Water Infrastructure

Pakistan's Indus Basin Irrigation System is a prime example of infrastructure development resulting in huge social costs, rampant corruption, and inefficiency. According to the World Bank, Pakistan officials have "yet to make the vital mental transition from that of a builder to that of a manager."[33]

Build

The Indus Basin project is the largest water diversion system in the world. Since 1950, the WB and other donors have helped construct the system through planning and nearly $20 billion in related projects. The project generates more than one-fourth of Pakistan's electric power. It is a massive network made up of nineteen dams, large canals, drainage highways, and more than 100,000 distributaries.

It is important to note that constructing this system has forcibly displaced more than 200,000 people. Decades after they were moved, thousands of families are still living in harsh conditions. A report prepared for the WB argues that the lack of replacement land and corruption in the system are "creating extreme hardship for the people."[34]

Neglect

Corruption is one of the primary contributors to inefficiency and disrepair. More than 60 percent of the irrigation water is lost from the canal head to the root zone. Maintenance problems such as leaks, overirrigation, and inadequate drainage remain as corrupt officials neglect maintenance tasks. Bureaucrats capitalize on positions by accepting kickbacks from wealthy stakeholders. This practice encourages projects with construction companies or large landowners while foregoing critical, but less personally lucrative, maintenance projects. According to the WB, "In the shadows of discretion and lack of accountability, lurk … powerful people who manipulate the system for their ends and of those in the bureaucracy who serve them and are rewarded for this service."[35]

Rebuild

It seems logical at this point in the infrastructure's life-cycle that greater emphasis should be placed on proper maintenance and management of existing structures as opposed to building new infrastructure. President Musharraf announced just the opposite in January 2006, stating that his government would start construction of the Bhasa and Kalabagh dams by 2016 at a cost of more than $20 billion, although it is estimated 160,000 people would be displaced as a result of further construction.

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