

Assessment of Atlantic Philanthropies' Support for the Health Sector in Viet Nam:1998– 2003

**Especially Healthcare Facilities in Ho Chi Minh City,
Da Nang, Hue, and Quang Tri/Dong Ha Town**

FINAL REPORT

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LIST OF ACRONYMS

| | |
|---------------|---|
| AC | Air Conditioner |
| AIDS | Acquired Immuno-Deficiency Syndrome |
| APS | Atlantic Philanthropic Services |
| BCC | Behavioral Chang Communication |
| CMAA | Construction Management Association of America |
| CPFC | Committee on Population, Family and Children |
| CPI | Clear Path International |
| CVC | Cardiovascular Center (Hue) |
| DOLISA | Department of Labor and Social Affairs |
| DORC | Da Nang Orthopedics and Rehabilitation Center |
| EEG | Electro-encephalograph |
| EENT | Eyes, Ears, Nose and Throat |
| EKG | Electro-cardiograph |
| EMWF | East meets West Foundation |
| ER | Emergency Room |
| FAC | Fondation Alain Carpentier |
| FERF | Family Emergency Relief Fund |
| HCMC | Ho Chi Minh City |
| HCH | Hue Central Hospital |
| HHP | Health Heart Program |
| HIV | Human Immuno-deficiency Virus |
| ICU | Intensive Care Unit |
| IM | Internal Medicine |
| IMCI | Integrate Management of Childhood Illnesses |
| INGO | International Non-Governmental Organization |
| JICA | Japan International Cooperation Agency |
| MCNV | Medisch Comite Nederland - Vietnam |
| MIS | Management Information System |
| MOH | Ministry of Health |
| MPH | Masters of Public Health |
| NAV | Nordic Assistance to Vietnam |
| NGO | Non-governmental Organization |
| OB-GYN | Obstetrician-Gynecologist |
| ODA | Overseas Development Assistance |
| OT | Operating Theatre |
| PC | People's Committee |
| PEP | Physician Education Program |
| PHC | Primary Health Care |
| STI | Sexually Transmitted Infections |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children's Fund |
| USD | United States Dollars |
| VAT | Value Added Tax |

| | |
|-------------|--|
| VND | Viet Nam Dong |
| VVAF | Viet Nam Veterans of America Foundation |
| VVRP | Vietnam Veteran Restoration Project |
| WHO | World Health Organization |
| WVI | World Vision International |

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Executive Summary

Introduction:

This assessment reviews the program of support of Atlantic Philanthropies to the Health Sector of Vietnam for the past five years, from 1998 through April 2004. The focus of this assessment is on the Atlantic-supported Da Nang, Hue and Quang Tri hospitals new building construction and renovation projects; the Atlantic supported humanitarian projects carried out by East Meets West Foundation (Da Nang and Quang Tri offices), the program of support to Heart Institute in HCMC, and selected other projects such as capacity-building and health professional training projects in Da Nang City, and the Kids First Village project in Dong Ha Village. The report describes the activities, achievements, budgets, project impact, challenges, funding leverage gained from Atlantic support and the recommendations for future financial and program support. However, it should be noted that there are a number of other Health Sector projects funded by Atlantic Philanthropies (e.g., in Hanoi and Ho Chi Minh City) that are not included in this report.

The assessment reviews and evaluates over 17 health sector projects (and subprojects under EMWF) supported by Atlantic Philanthropies spanning a five-year period from 1998 – April 2004, with projects ranging in size from \$34,000 (Operation Walk - Paul Wade's project) up to \$3,800,000 new CVC project, which in aggregate total almost \$19 million dollars in Atlantic funds. Except for the Heart Institute project in Ho Chi Minh City all the other health sector projects reviewed in this assessment were or are still being carried out in Central Vietnam provinces, and most of these are under the management, supervision and/or implementation by the East Meets West Foundation offices based in Da Nang and Quang Tri.

Methodology:

Fieldwork and site visits took place over 12 working days in Da Nang (5 days), Hue (3 days), Quang Tri (3 days), and Ho Chi Minh City (1 day), during the period from February 19 through March 5, 2003. Interviews were conducting with over 50 patients/clients/beneficiaries and over 50 senior, mid-level and junior hospital staff, project staff, EMWF staff and other NGOs (e.g., Kids First Vietnam; Clearpath International) and government employees and consultants,

Each specific project assessment is structure in a consistent way the report structure based on the scope of work. The major components of each project assessment section consists of a brief description and documentation of (a) Project Activities; (b) Project Budget; (c) Project Achievements/ Impact (in terms of staff and patient satisfaction; increased client flow; increased number of inpatients and in the number of services provided; improved health services; staff receiving training; medical buildings built or renovated; etc); (d) Challenges/Needs identified; (e) Leverage/ Other Benefits (in terms of funding leverage gained and support from other sources); and (f) Recommendations (for future financial and/or program support for the activity).

The assessment describes activities, budgets, achievements, challenges, leverage gained and recommendations for the following Atlantic-funded activities:

1. Heart Institute in HCMC
2. Da Nang City Hospital Pediatric Department Renovation (EMWF)
3. Da Nang City Hospital Surgery/ICU Building Renovation (EMWF)

4. Da Nang City Hospital Ob/Gyn Building Renovation (EMWF)
5. Da Nang City Hospital new Internal Medicine Building Construction Project (EMWF)
6. Da Nang City Hospital new Morgue and Funeral Home Construction Project (EMWF)
7. Da Nang City Hospital Medical Waste (non-solid) Treatment Facility Project (EMWF)
8. Da Nang City Hospital new Multi-purpose Building Construction Project (EMWF)
9. Da Nang City Hospital new Emergency Care & Diagnostic Center Construction Project (EMWF)
10. EMWF Role in the Atlantic Philanthropies Project
11. EMWF Healthy Heart Program
12. EMWF Humanitarian/Health Projects: FERF Project
13. EMWF Humanitarian/Health Projects: Water Systems Projects
14. EMWF Health Project: Capacity-Building/Training for Da Nang City Health Service Staff
15. EMWF Humanitarian/Health Projects: Duy Xuyen District Hospital and commune health clinic constructions/renovations
16. EMWF Humanitarian/Health Projects: Operation Walk (Dr. Paul Wade's Project)
17. EMWF new Pediatrics Building at Hue Central Hospital
18. EMWF New Cardiovascular Center at Hue Central Hospital
19. EMWF Quang Tri General Hospital Pediatrics Ward and Trauma 1 & 2 Surgery Ward Renovation Project
20. Kids First Village Project
21. EMWF Other Humanitarian Projects (funded with Atlantic funds): e.g., school constructions in Quang Tri, Quang Binh, Quang Nam etc, and other humanitarian aid such as compassion homes, electrification systems, bridges, pig breeding, etc.

The assessment was limited by the fact that some projects had no formal proposals prepared prior to funding and project that did have proposals prepared often did not have clear-cut and quantifiable project objectives, indicators, and performance outcomes that were monitored and measured over time. Hospital staff and patient satisfaction with new facilities constructed or renovated, patient satisfaction with services and support received (e.g., healthy heart program patients, family emergency relief fund recipients, and beneficiaries from other humanitarian programs supported by the Atlantic Philanthropies) are used as indicators of positive outcomes. Client/patient data were collected and changes/increases measured in client/patient flow at hospitals and other health project and program sites over time (before, during and after project activities). A list has been prepared all of the Atlantic-funded EMWF humanitarian projects (with budgets, number of beneficiaries, by year for 1999-2004). Hospital trend were collected and used to graph changes in the total number of hospital inpatients, pediatric patients, cardiovascular patients, surgery patients, Ob/Gyn patients, deliveries, and burn patients for the 1998-2003 period for Da Nang City Hospital, Hue Central Hospital, and Quang Tri General Hospital (a period when all Atlantic-funded projects were initiated and, in many cases were completed), with subsequent marked increases observed in the number of clients using the specific services/activities/facilities/projects funded by EMWF and Atlantic Philanthropies.

Main Findings:

Atlantic-supported projects of construction and/or renovations of hospitals and other medical facilities in Central Vietnam have had a positive impact on the satisfaction of both the medical staff and the patients and families receiving services at these facilities. There is widespread acknowledgement of the improvements described as more spacious, lighter, better ventilated, more comfortable, more hygienic and easier to clean (more toilets, better beds, frequent waste removals and room cleanings). Medical staff are generally much happier working in the renovated or new buildings and patients enjoy their stays better as well. However, patients crowding continues to be a problem in some departments and wards, as the number of patients have increased dramatically with

the improvements in the quality of the facilities and services. Also, the medical staff in a number of departments still feel there is a lack of up-to-date high quality equipment to help them do their work effectively. Both the staff and some patients on top floors or eastern exposure windows expressed some concerns about heat and lack of enough ventilation in the summer months, even with the additional fans and ACs in some wards as part of the renovation or new constructions. Some discomforts continue as well for patients with some faulty plumbing facilities (e.g., broken faucets that do not get repaired in a timely fashion, and poor drainage of showers in patient rooms).

The positive impact of the Atlantic-supported construction and renovation projects at hospital facilities in Da Nang, Hue, and Quang Tri is reflected quantitatively in the dramatic increase in the reported number of inpatients attending the new facilities or the renovated ones since the work has been completed. The Atlantic Philanthropies support for the new Cath-Lab at the Heart Institute has also lead to a dramatic increase in the number of life-saving closed-heart cardiovascular intervention procedures being performed at the Heart Institute.

The physical improvement of the hospitals and other health facilities made possible by Atlantic financial support with EMWF technical support by themselves have produced more comfortable and spacious, more hygienic, more up-to-date and better furnished health facilities which have made the facilities more attractive to clients, as reflected in the dramatic increases in patient flow (sometimes a doubling of inpatients) in the years immediately following the renovations or commissioning of new buildings. The hospital staff also report the facilities are now more comfortable and have created a more positive working environment for staff.

Projects such as the healthy heart program (HHP), the family emergency relief program (FERF), and Operation Walk have also had a significant impact on the health, lives, and survival prospects for many needy children and some adults too who benefit from the financial support, medical care and rehabilitative services received through these project. These project were efficiently run, and are sustained by more than one donor contributing to them.

Annually more than 60,000 inpatients at Da Nang City Hospital, Hue Central Hospital, and Quang Tri Hospital are benefiting from new or renovated facilities and equipment that were made possible with Atlantic funds and EMWF technical assistance and supervision. These inpatients include pediatrics patients, heart patients, maternity patients, those receiving surgery, burn victims, and internal medicine patients. Thousands of outpatients as well, and hundreds of physicians and other medical personnel have also benefited from the Atlantic-supported hospital building constructions or renovations. The Atlantic-supported Heart Institute Cath-Lab, Healthy Heart Program, Family Emergency Relief Fund, and Operation Walk have provided needed surgery or other medical treatment and therapy for hundreds of poor children. In the near future many health personnel at all levels in Da Nang City will be receiving Atlantic-supported training in key public health program and management areas.

The purpose and utility of the physician education project for Da Nang City Hospital doctors and nurses and the current capacity-building activities for the and Health Department medical staff at all levels is less clear. Training curriculums and training courses need to be adapted to the appropriate level of health professional and at the appropriate level of technology available for provision of health services in the local setting. EMWF does not have much public health training expertise.

Humanitarian projects supported by Atlantic Philanthropies such as water systems projects, compassion homes construction, and building kindergartens and primary schools also are improving the quality of lives of may beneficiaries, but it is more difficult to document the public health impact of these activities.

Approximately, 300,000 persons have been identified to be directly benefiting from Atlantic-supported humanitarian school, water systems, and commune clinic projects administered through EMWF in Central Vietnam. However, the actual number of beneficiaries is likely to be much higher than that. The hospital facilities and community outreach projects supported by Atlantic Philanthropies in fact, covers an area mostly in Central Vietnam including approximately 15 million people who potentially benefit from these projects if the need is there.

The number of beneficiaries will increase even more dramatically in the future when new construction projects are finished such as the Da Nang City Hospital new Emergency Care and Diagnostics Center and the soon-to-be constructed Multi-purpose building, and the construction of a new Cardiovascular Center at Hue Central Hospital. All total for all of the completed, ongoing, and recently approved Atlantic-funded projects reviewed in this assessment, the total amount of Atlantic funding for these activities is almost \$19 million dollars U.S.

Main Recommendations:

Below are some of the main recommendations to each of the Atlantic-supported health projects in Central Vietnam and HCMC that are reviewed in this report, followed by some Atlantic Program-wide recommendations.

Specific Recommendations for Atlantic-Supported Projects

1. Heart Institute in HCMC

- a. Any possible future Atlantic support in this area should be based on a clearly defined national strategy for Atlantic/Vietnam's future support for health interventions and care relating to heart disease. If future Atlantic support in this area is deemed to be a priority, efforts could concentrate on supporting in-country training and international training trips for Vietnamese cardiologists and cardiovascular surgeons and nurses working in this field.
- b. The linkage between The Heart Institute and the EMWF's Health Heart Program should be continued and strengthened, especially for referrals and follow-up for complex HHP cases, at least until the new Cardiovascular Center in Hue is constructed and becomes fully operational.
- c. There should be continued communication and coordination with the Hue Central Hospital as it develops the soon-to-be-built Cardiovascular Center (CVC), which will become increasingly more involved in the EMWF's HHP for patients in the central provinces.

2. Da Nang City Hospital Pediatric Department and Burn Center Renovation (EMWF)

- a. The Pediatrics Ward should consider moving the hospital records stored on the newly added fourth floor to the new Morgue Building second floor which has been designed and designated as a hospital record storage/filing room. This would free up more space for the pediatrics patients who are still very crowded in the patient rooms.
- b. The Pediatrics and Burn wards may need some extra fans (for the hot summer months) and a few heaters (particularly for the burn ward during the cool season). These items are not on the hospital medical equipment request list that JICA is planning to fund.

3. Da Nang City Hospital Surgery/ICU Building Renovation (EMWF)

a. With the surgery department various units now divided between the surgery building and the internal medicine building, more efforts will be needed to collate all of the surgery data from the various units, and to ensure that good cross-unit communication and information sharing, supervision, surgery training, and quality assurance are maintained across all surgery units, regardless of their location.

b. The Atlantic consultant endorses Dr. Paul Wade's recommendation that the surgeons at Da Nang City Hospital receive quality up-to-date or brand new hand held surgical instruments, proper brushes for cleaning instruments and other supplies. Efforts should be made by the Da Nang City Hospital to see if the JICA grant to be awarded for providing medical equipment can include funds for procurement of these items.

c. The surgical units medical staff need to reinforce the need to follow universal precautions procedures for infection prevention, and to ensure that medical staff and custodians responsible for cleaning operation theatres and equipment actually follow proper room cleaning and equipment sterilization procedures.

4. Da Nang City Hospital Ob/Gyn Building Renovation (EMWF)

a. The Ob-Gyn ward, as with many other medical departments visited in the hospital, needs to give greater attention to providing high quality of care in terms of the counseling and information provided, the constellation of services and the continuity of services (i.e., referrals and linkages) as well.

b. Because the 4th (top) floor is reported to be hot in the summer months and is short at least two ACs, efforts should be made to procure at least two more ACs, and possibly a few standing fans and more ceiling fans for the hot months. These are relatively minor investments which will improve the usability of the 4th floor area and will likely improve the productivity of the staff working there.

c. With the number of deliveries in the Ob-Gyn maternity ward nearly doubling in the past five years, that has resulted in continued crowding and noisiness in patients rooms, efforts should be made to secure more patient rooms and beds for Ob-Gyn maternity patients.

5. Da Nang City Hospital new Internal Medicine Building Construction Project (EMWF)

a. EMWF and the Da Nang Hospital Administrative and Planning staff should work together to see how the needs of some departments and wards in the new Internal Medicine Building for more hospital beds (and toilet facilities) could be accommodated through more efficient space allocation when the new Emergency Care Building and the construction of the new Multi-purpose Building are completed.

b. Though both hospital staff and patients and their families are very happy with the more modern, convenient, more hygienic, better lighted, better ventilated and equipped hospital departments and wards in the internal medicine building, attention now should be focused on providing quality care in terms of counseling, diagnostics, treatment, referrals and follow-up. This will require ensuring that the departments and wards are well-equipped and that the staff receives the proper training on counseling, technical medical procedures, monitoring, management and supervision, and on other aspects of quality of care. Atlantic Philanthropies-supported EMWF projects should work with Da

Nang City Hospital Administration and with other donors, and other public health organizations and institutions who provide the needed training and medical equipment, to help ensure the effective provision of quality medical care in the departments and wards of the Internal Medicine Building and in the other new or renovated medical departments at the hospital as well.

c. If additional Atlantic Philanthropies funds are made available, EMWF should consider assisting the Da Nang City Hospital in meeting the needs of the Internal Medicine Building's various department and ward requests for such items as better quality faucets in the toilet rooms; more ACs for the serious patient rooms; a small room for minor operations for the department on the 3rd floor of the building; direct oxygen lines for the non-serious cardiovascular patient rooms as well, in the cardiology ward on the 2nd floor.

d. If it has not been done so already, the Da Nang City Hospital's various department and wards should include all of their medical equipment needs in the grant request to the Japanese donor agency JICA.

6. Da Nang City Hospital new Morgue and Funeral Home Construction Project (EMWF)

a. The second floor of the Morgue Building should be used for its intended purpose of storage of hospital records. This would free up more space in the crowded Pediatrics Building for patients, by moving the hospital records from the newly added fourth floor of the Pediatrics Building over to the second floor of the Morgue Building.

7. Da Nang City Hospital Medical Waste (non-solid) Treatment Facility Construction Project (EMWF)

No Specific Recommendations are made.

8. Da Nang City Hospital new Multi-purpose Building Construction Project (EMWF)

a. The new Feasibility Study for the Da Nang City Hospital's planned new Multi-purpose Building needs to be completed as soon as possible during 2004, so that the detailed design and final approval process can be completed and the construction work begin (probably in early 2005).

b. The Da Nang City Hospital Administration and Planning offices should consider the request from the many still overcrowded patient wards and departments in the hospital, when deciding on the utilization of space in the new Multi-purpose Building, the new Emergency Building, Internal Medicine Building and renovated wards. Adequate space for patients and provision of quality care should be given the highest priority. Storage of hospital records, and dormitories for medical students, interns, and visiting family members may need to be consolidated or (in some cases) moved next to the hospital so that patients can receive the proper care they need. If funds are available, EMWF and Atlantic Philanthropies should consider supporting the hospital if it makes decisions to use the hospital space more efficiently to meet the needs of patients (in terms of additional renovations or rearranging of departments across buildings).

9. Da Nang City Hospital new Emergency Care and Diagnostic Center Building Construction Project (EMWF)

a. The Da Nang City Hospital administration and planning offices should meet with various medical departments again, and with EMWF and representatives from Atlantic Philanthropies to clarify the needs for space for patients and for the administrative and medical staff, and how the new buildings

funded by Atlantic Philanthropies can be used effectively to meet those needs and to provide quality care.

10. EMWF Role in the Atlantic Philanthropies Project

a. Since EMWF/Da Nang Office may be getting stretched too far geographically on Atlantic-supported projects, EMWF they should consider targeting Atlantic-supported interventions and health infrastructure construction projects in selected focal districts and communes (having the greatest need) in Da Nang City and Quang Nam province for the next three-five years. This will ensure maximum public health impact in the focal communities and be a more efficient use of available funds. The Atlantic-supported projects should be more linked to each other in the focal areas and be more comprehensive. This will ensure better coordination and supervision of project activities and lighten the strain on human resources (staff) at EMWF. However, EMWF's HHP outreach program should continue to cover a number of provinces to identify young heart patients in need of the vital support for treatment provided by EMWF and Atlantic. EMWF/Quang Tri Office should also remain focussed on selected focus districts and communes in Quang Tri and Quang Binh provinces for the same reasons.

b. Since the only public health/medical professional on the EMWF staff in Vietnam (Dr. Truong Dien Long) has left EMWF to pursue a Masters degree in HCMC, EMWF should seriously consider recruiting another medical/public health specialist for its staff (either international or Vietnamese), especially if it intends to continue to work on Atlantic-funded health projects. EMWF needs to consider its potential role as Atlantic focuses more of its financial support on health projects in Vietnam, and not only health infrastructure construction projects, but health education and training, capacity-building, and local prevention of communicable diseases and injuries, blindness prevention and sight restoration, and rehabilitation.

c. Given the Atlantic Philanthropies increasing focus in Vietnam on health, and on health promotion and communicable disease and injury prevention, and on capacity-building of health personnel, as well as its traditional support of building new health infrastructure (bricks and mortar), EMWF needs to take a strategic look at its strengths and weaknesses in terms of its current human and financial resources, and establish its program priorities for the future.

d. EMWF may wish to consider partnering with an International NGO and/or a Vietnamese public health organization, if EMWF is going to continue and/or expand its involvement in more comprehensive health projects at the local level.

11. EMWF Healthy Heart Program

a. It is recommended that Atlantic support for the HHP activities is continued, with continued careful assessments of each family's financial needs and referrals to appropriate health institutions for cardiovascular care (e.g., Heart Institute in HCMC and the Hue Central Hospital).

b. Future HHP activities, including the identification, screening and referrals should be closely linked to the service program of the new CVC that is beginning the construction stage at the Hue Central Hospital. Once operational the CVC should assign project staff and social workers at Hue Central Hospital CVC Center to work closely with EMWF's Da Nang and Quang Tri Offices on HHP patient case management, to avoid delays in patients receiving needed heart care services.

c. If and when a new multi-purpose building is constructed with Atlantic money at the Quang Tri hospital, with a new cardiology unit included, some of the medical assessments and doppler tests

could be done right there in Dong Ha to determine if surgery is needed. This assumes that there will be an adequately trained cardiology doctor at the Quang Tri Hospital and that the necessary equipment will be there. This will save the HHP patients/family and EMWF time and money.

d. Once the new CVC building is completed and operational at the Hue Central Hospital, the EMWF Quang Tri office should take advantage of the improved facilities there to refer HHP patients there for surgery or other interventional cardiology procedures, rather than to HCMC or Hanoi, thus saving Atlantic project funds.

12. Capacity-Building/Training for Community-Level Health Staff in Da Nang City

a. There has been a shift in Atlantic' health sector support in Vietnam from primarily “bricks and mortar” construction projects for health facilities to a more comprehensive model for community health care, including training in the management and delivery of quality health services, and linkages between different levels of care and between prevention and treatment. The Da Nang City Health Department capacity-building project is a positive step in the right direction toward achieving this goal. These capacity-building activities should be linked to Atlantic-supported activities to improve medical facilities and the quality of health services in the roject areas.

13. EMWF Humanitarian/Health Projects

a. FERF (like HHP) is an important life-saving or life-improving EMWF project supported by the Atlantic Philanthropies and that should be continued in the project provinces. Once the new CVC building is completed at Hue Central Hospital, and hospital facilities are further improved at Da Nang City Hospital and Quang Tri General Hospital, the EMWF Da Nang and Quang Tri offices should take advantage even greater advantage of the improved facilities at these locations to refer FERF and HHP patients there for surgery, rehabilitation, or other interventional cardiology procedures, rather than to further destinations such as HCMC or Hanoi, thus saving Atlantic project funds and also time and money on the part of the HHP and FERF patients and their families.

b. The humanitarian efforts such as building water systems and new schools should be determined on the basis of clearly defined objective criteria determining the priority areas in the greatest need for such assistance, so that limited Atlantic funded activities will be put into action where they are most needed (i.e., they should be need-based rather than demand/request based projects).

c. Priority could be given to Atlantic-supported EMWF projects for district hospital and commune health clinic constructions/renovations in focal districts and communes where the need is greatest and where other complementary Atlantic-supported activities are underway (e.g., training/capacity-building of health professionals)

d. Because Operation Walk was cost-effective, brought highly qualified technical expertise to Vietnam from abroad, and had a high positive public health impact, Atlantic Philanthropies support for such activities should continue and be complemented by supporting more efforts to prevent injury and birth defects through education and behavioral change communication interventions in the project provinces.

14. EMWF new Pediatrics Building at Hue Central Hospital

a. Action needs to be taken to get other donors involved in the funding of much needed medical equipment and training of hospital staff in the Pediatrics Department.

- b. Atlantic should consider funding a hospital guesthouse for pediatric patient families, by itself or in consortium with other donors, especially if the pediatric patient load continues to increase and room for parents staying in the building is reduced.
- c. The Pediatrics Department should have more decentralized authority/autonomy, or at least greater involvement in decision-making for the operation of and growth in the activities of the Pediatrics Department.
- d. With the Pediatrics Building now complete, Atlantic should consider supporting the capacity-building of the technical monitoring and managerial skills of the key staff in the new Pediatrics Department of this Level I hospital in Central Vietnam: i.e., training of pediatrics and hospital senior staff in hospital management; providing ward staff (doctors and nurses) with training in patient and family counseling skills that are often lacking; training senior and junior health staff how to ensure quality of care through good monitoring and supervision of provider-client interactions, counseling, making referrals, technical competence of health providers in the required exams and procedures, infection prevention procedures (e.g., practicing universal precautions, basic hygiene practices in the wards, and cleaning and maintenance of wards and equipment), logistics management and record-keeping.
- e. EMWF should continue to monitor the plumbing and drainage and heat/ventilation situation in EMWF/Atlantic renovated buildings and the new buildings in all three hospitals (Quang Tri General Hospital Trauma & Pediatric Wing; Hue Central Hospital Pediatrics Building, and the Da Nang City Hospital renovated and new buildings) to determine that the plumbing and ventilation is adequate for ensuring a safe air temperature and a well-functioning and hygienic plumbing, toilet and drainage system. This issue may have already been reported in the Atlantic construction consultants report (Troha Consultants Report, April 2004), but it is mentioned here because the issues of poor drainage and poor ventilation/excessive heat in the summer in the Hue Pediatrics Building were raised in the February/March 2004 interviews that I conducted with some hospital staff, patients and patients' visiting family members. EMWF and its contractors have already addressed some of the mentioned problems of plumbing and air ventilation, but more work may still be necessary to better resolve any continuing problems in these areas.

15. EMWF New Cardiovascular Center at Hue Central Hospital

- a. The Hue Central Hospital senior management and the CVC project team should consider requesting Atlantic support for hiring an international consultant to advise regularly on the management of the new CVC for at least the first two years of the CVC's operation. This will help build local management capacity, and ensure more efficient and effective operation and long-term organizational and financial sustainability of the CVC.

16. EMWF Quang Tri General Hospital Pediatrics Ward and Trauma 1 & 2 Surgery Ward Renovation Project

- a. EMWF should continue to monitor the plumbing and drainage and heat/ventilation situation in EMWF/Atlantic renovated or new buildings in all three hospitals (Quang Tri General Hospital Trauma & Pediatric Wing; Hue Central Hospital Pediatrics Building, and Da Nang City Hospital renovated and new buildings) to determine that the plumbing and ventilation is adequate for ensuring a safe a safe air temperature and hygienic plumbing, toilet and drainage system. It is mentioned here because the issues were raised by some hospital staff, patients and their family members in some wards of all three hospitals (Hue, Quang Tri and Da Nang hospitals) during interviews with the Atlantic consultant (myself). Although EMWF and its contractors have already addressed the

problems of plumbing and ventilation problems, more work may still be necessary to better resolve any continuing problems in these areas.

b. Once renovations and new buildings constructed with support from Atlantic and EMWF are completed, some additional support for appropriate staff training in technical areas, quality of care, and in hospital management would be appropriate for Atlantic to ensure proper management of client flow, maintenance of facilities and the provision of high quality care. This will help ensure the sustainability of this Atlantic investment. EMWF, Atlantic and the hospital management should work together and with other donors to ensure that the improved physical hospital facilities have compatible up-to-date equipment and trained staff for effective functioning of health care services.

c. Atlantic and EMWF should continue to be active (even proactive) in contacting and dialoguing with other donors to ensure that the renovated and/or new facilities built with Atlantic and EMWF support will have the most appropriate medical equipment, and information and communication system to best serve the patients and assist the hospital staff in their work. Supporting a comprehensive approach to developing health services, which includes building excellent facilities, equipping them appropriately, and training/building capacity of the staff to provide modern high quality health services and manage the hospitals and wards efficiently and effectively, is the best way to ensure positive health outcomes and sustainability of the health institutions being supported by Atlantic, EMWF, and other organizations.

17. Kids First Village Project

a. The proposed Kids First Village vocational training and rehabilitation programs are very diverse and ambitious requiring a wide range of equipment and technical expertise. Therefore, it is recommended that the proposed activities be prioritized and feasibility of implementation assessed. Careful attention must be given to the recruitment of skilled professionals in each of the training areas selected and a sustainable training program and curriculum plan needs to be developed for each selected activity to be included in the training and rehabilitation program. Selection of activities needs to be based on the potential demand for the particular training (i.e., the likely numbers of students in the training activity; the likely number of persons with specific disabilities participating in the Kids First Village programs and needing specific rehabilitation services), and also on the ability to recruit appropriate qualified staff for that activity.

b. For the Kids First Village, it could be useful to invite an experienced international NGO to assist Kids First Vietnam in providing on-site overall management of the Kids First Village. A number of non-governmental organizations have experience working in the health field, working with vocational training and income generation programs, working with people with disabilities and with disadvantaged youth in Vietnam. Some organizations (such as Save the Children U.S. and U.K, World Vision International, Plan International, and Pearl S. Buck International) have experience in working in many or all of the above-mentioned areas, both in Vietnam and around the world.

Program-wide Level Findings and Recommendations:

a. Overall Program Strategy and Impact

The Atlantic health sector program should balance support for constructing or renovating health facilities with the equally important need to support technical and management training of community and hospital health care staff to ensure quality of care and sustainable health service delivery programs. Appropriate and functioning up-to-date medical equipment is also needed, and

Atlantic and EMWF should work with the health facilities and other donors to ensure that comprehensive support for these different components is provided.

b. Site and Project Selection

Central Vietnam is one of the poorer regions of Vietnam and economically disadvantaged. Periodic floods and disease outbreaks (such as Dengue fever) have added serious public health problems to this region in recent years. Most international NGOs concentrate much of their work in the northern and southern regions of the countries where they also tend to have their headquarters or project offices (i.e. Hanoi and HCMC). Thus, the Central Viet Nam region is a very appropriate region for Atlantic and EMWF to be concentrating its health and humanitarian aid efforts, although it is good that EMWF and Atlantic's efforts are not exclusively in this region alone.

c. Synergies/Multipliers

In some cases the presence of Atlantic and EMWF has had a synergistic effect, in terms of drawing in the involvement of other international NGOs, projects and donors (e.g., CPI; VVRP; CPFC; JICA; Spanish government development agency; etc.) and in expanding the programmatic and geographic scope of the initial projects .

d. Leverage Gained

Other donors and some international NGOs have now begun contributing to the hospital improvement activities and humanitarian aid activities initiated by EMWF with Atlantic financial support. The amount of leverage gained in Hue does not appear to be as evident as was observed in Da Nang and Quang Tri. Because of Atlantic and EMWF support for renovations and new building, the Da Nang, Hue and Quang Tri hospitals have evidently been able to free up more of their hospital budgets to send medical staff for needed training in various technical and specialty areas. Some donors such as JICA and the Spanish Government have made substantial grants to cover the costs of equipping the new and renovated facilities at Da Nang City Hospital (JICA) and at Quang Tri General Hospital (Spanish Government), but no such leverage has been reported yet for Hue Central Hospital's new Pediatric Building.

e. Atlantic's Role: Staff Role and Interactions with Clients

The Atlantic relations and interactions with EMWF have been very positive and productive, while EMWF's interactions and relations with the local beneficiaries (health institutions, communities, and individual families) have also been very positive, productive and efficient in terms of cost-effectiveness. However, there have been problems with the level of cooperation with EMWF on the part of some local contractors, in the quality of the work performed by some of the local construction contractors and in the quality of some of the materials some contractors used (which required redoing some work and replacing poor quality materials at extra cost). Also, the communication between the Heart Institute and the Fondation Alain Carpentier and the Atlantic Foundation in the funding and establishment of the Cath-Lab interventional cardiology center at the Heart Institute was done at a very high level and obtaining documentation of the process was difficult as a few years have now passed since these activities were completed.

f. Future Platforms

The new training program for all levels of health providers in Da Nang City, and support for selected commune and district level health facilities (which could serve as models) may provide a better linkages between primary health care and prevention activities in the community and secondary and tertiary hospital care facilities in Da Nang City. A comprehensive program of public health sector support can be very expensive and should be done in only one city or province (e.g., Da Nang City or Quang Nam), with only selected communes/wards and district level sites supported by Atlantic to

serve as models for further health management and technical training and for medical facilities improvement, and for scaling successful projects to other communes/ward and districts.

Traffic and trauma injuries, as well as congenital defects, seemed to predominate the surgery demands on the health institutions the Atlantic consultant visited. And as the HIV/AIDS epidemic continues to spread throughout Vietnam, it will undoubtedly increasingly affect the central provinces in the years to come. Special attention may need to be devoted to these public health issues in both terms of local capacity for prevention and care and treatment work. Thus, any comprehensive public health/health sector effort provided by Atlantic in one province or city or nationally should keep trauma accidents prevention and care, and HIV/AIDS prevention and care high on the Atlantic agenda, if an optimum long term positive public health impact is desired. Special arrangements may also need to be made for hospitals' preparedness during periods when there are floods and recurring epidemic outbreaks such as Dengue fever, which can overwhelm the hospital wards and staff human resources in the years they occur, regardless of the size of the facility, as was reflected in some of the staff interviews and in the hospital data of the past 5 to 7 years that was shown to the Atlantic consultant.

Additional Recommendations

- With limited human and financial resources Atlantic and EMWF should try to maintain a Geographic Focus (but try to expand HHP to reach more children in need);
- Atlantic should consider providing a more comprehensive and integrative program of health sector support in selected "Model" or "Neediest" project districts and communes (that supports both preventive and curative services and human resource capacity-building);
- In project provinces Atlantic and its implementing partners should consider expanding prevention efforts to include behavioral change communication (BCC)/mass media and peer education public health activities in key areas such as injury prevention, HIV/AIDS prevention and care; drug/alcohol abuse prevention and harm reduction; blindness prevention; and prevention of communicable diseases (to have a wider public health impact): "An ounce of prevention is worth a pound of cure";
- Make more effort to document projects and disseminate Lessons Learned Reports to better inform others and for others to consider the successful projects for possible replication;
- Set realistic objectives, targets, with measurable indicators and outcomes and make evaluation plans in the project development stage;
- Identify and work more closely with other donors to coordinate project support and avoid replication;
- Coordinate with other donors and the local health officials to ensure support is provided for appropriate equipment for medical facilities and that relevant training is provided to medical staff in both program management and technical areas;
- Find out the long term plans and other activities of local Health Departments in project areas to avoid wastage and/or duplication of efforts;
- Monitor project activities and expenditures regularly and more carefully (require reports and full documentation of expenditures) (Conduct audits regularly)

Description: Comprehensive and Integrated Approach for Atlantic Philanthropies Health Sector Support in Selected Geographic Areas of Vietnam

- Build Infrastructure/Facilities;
- Train and build human capacity (Technical Medical Skills and Management);
- Ensure Appropriate Equipment and Logistics/Supplies System (get other donor and local government support);

- Ensure the Provision of Quality Care (Counseling Skills; Infection Prevention; Access to Services; Confidentiality; Record Keeping/Management Information Systems(MIS); Public Health/Prevention; Referrals and Linkages; Constellation of Services; Technical Competence; Managing Client Flow/Waiting Times, etc.);
- Ensure sustainability and cost-effectiveness of health services (working with local health authorities and other donors to develop effective management and cost-recovery systems);
- Promote and Link prevention and care services and link different levels of services; increase public awareness of linkages. (Link hospital services with community outreach and prevention services, as well as effective referral and linkages with communal and district health care);
- Encourage improved and decentralized (when appropriate) planning and management decision-making, and the collection and use of program and services data and monitoring and evaluations to improve health service program performance.

Chapter I. Introduction

Atlantic Philanthropies first became involved in the health sector in Vietnam in 1998, with the initiation of medical building renovation and other community public health activities in Da Nang City and surrounding areas, with the East Meets West Foundation (EMWF), a humanitarian relief services organization working in Vietnam since 1988. Since 1998 Atlantic Philanthropies and/or its related predecessor organizations have supported a range of projects in the Health Sector in Vietnam with targeted grants for health infrastructure and intervention projects and capacity-building with such collaborating organizations as the Hanoi School of Public Health (Capacity-Building Training), Asia Injury Prevention Foundation, U.S. National Committee for UNICEF (Injury Prevention), Royal Melbourne Institute of Technology, University of Washington, Greater Seattle Association, Reach Vietnam, Johns Hopkins Center for Communications Programs (mass media/TV public health messages through tele-dramas and behavioral change communication), The Fondation Carpentier (support to the Heart Institute for Cath-Lab interventional cardiology procedures), Counterparts International (Emergency Trauma Care), and the Kids First Project (Rehabilitation and Vocational Training Center for disabled and disadvantaged children).

This assessment evaluates the Atlantic Philanthropies' Support for the Health Sector in Viet Nam from 1998 – 2003, especially the activities relating to Healthcare Facilities in Ho Chi Minh City, Da Nang, Hue, and Dong Ha Town, the role played by International Non-governmental Organization (INGO) East Meets West Foundation and by Atlantic staff. The report documents the activities, process, achievements and challenges of the Atlantic supported health projects in these locations, and attempts to the micro and macro impact the Atlantic supported projects have had on the principal beneficiaries and recommends possible future emphasis and directions of Atlantic support for health projects in Vietnam in the future.

Summaries of each Atlantic-supported Health Sector Project included in this Scope of Work are included, including a brief summary of the financial investment, analysis of the quality and appropriateness of each the project support and level of inputs, a qualitative and when possible quantitative evaluation of the micro and macro impact of each project in terms of the beneficiaries (including both health staff and the patients/clients receiving health services from Atlantic-supported facilities), and the absorptive capacity of the projects inputs based on the existing needs and demands for services. Some effort is also made to evaluate the extent to which the individual projects fit into the overall current and future program strategy of Atlantic support to the health sector in Vietnam, and to determine what leverage was gained in getting other donors involved in supporting complementary health activities. Atlantic and EMWF roles and interactions with each other and the clients/beneficiaries are also explored to a lesser extent.

This Consultancy Report Serves To Inform Atlantic about the effectiveness and efficiency of the implementation of these projects from a “software” perspective rather than analysis of the architectural, engineering, and construction related aspects of the Atlantic support. The “bricks and mortar” construction “hardware” perspectives, achievements and possible problems encountered and unresolved issues related to construction are being addressed in a separate assessment being prepared by Mr. John Troha of Delta Construction Company (see draft report, 2004).

For health services to be truly effective, there needs to be a number of components in place: (1) physical health infrastructure containing appropriate and accessible facilities at a scale that is capable of meeting the needs of the community; (2) well-trained, qualified technically competent health staff capable of providing quality health care and services (including counseling, providing

confidential information, diagnostics, ethical treatment, and referrals services); (3) appropriate up-to-date medical equipment, medicines, tools and materials for diagnostics, medical procedures, and post-procedure rehabilitation care; and (4) an effective health care management and administration system to ensure that timely and appropriate financial and health service administrative decisions and logistical provisions are made on a daily basis, without unnecessary centralized, bureaucratic procedure. This report will make some recommendations on how to maximize the effectiveness of the investments Atlantic has already made on health infra-structural development, particularly with Da Nang City Hospital, Hue Hospital, and Quang Tri Provincial Hospital, and other selected health facilities that have greatly benefited from Atlantic support in recent years.

Methodology: Field work and Data Collection

This consultancy assessment by Dr. Thomas T. Kane, commenced on February 15th with the signing of a consultancy agreement of 26 days Scope of work, including 14 days of fieldwork (interviews and data collection) in HCMC, Da Nang, Hue, Dong Ha, and Hanoi, four days of data analysis, five days of report writing, 2 day of revisions and follow-up work, and 1 day of dissemination activities. The consultant reviewed and analyzed published and unpublished documents and data, including Project Description/Summary documents provided by ATLANTIC, EMWF, the Heart Institute (HCMC), and the Kids First Project, 12 renovation/upgrading and/or new building construction feasibility studies, EMWF annual reports, brochures, and newsletters, EMWF and ATLANTIC web pages, and trend data on in-patients, out-patients, medical exams, surgeries, medical procedures, number of medical staff, inventories of medical equipment and equipment needs, training data, data on other donor involvement, before, during and following ATLANTIC-supported renovations/upgrading and/or new construction of medical facilities.

In addition to interviews with key staff at ATLANTIC/Vietnam Office, EMWF/Vietnam Offices in Da Nang and Quang Tri (Dong Ha Town) and Kids First Project and over 50 interviews were conducted with medical, administrative and custodial staff (of all levels) at the wards, departments, and facilities benefiting from ATLANTIC support. These staff were asked about their perspectives of the facilities and services now compared to prior to the renovations or new constructions, their further needs for support to provide quality care, and the leverage gained from the ATLANTIC project in soliciting additional donor/sponsor support for the improvements of health facilities and the quality of care and services provided there.

In addition, over 50 interviews were also conducted with clients/patients at the various facilities benefiting from ATLANTIC support. Questions were asked about their perceptions of the facilities now and the services they receive now (and if they had visited the facility prior to the renovation or new construction) what were the major improvements, differences and/or difficulties and needs they experience today compared to the time prior to the renovation. Respondents first names (only), what province and district they came from (and sometimes distance) and their age, sex and reason for visiting the health facility today and satisfaction with the facilities and services were recorded in each interview. Five families benefiting from the Healthy Heart Program and three benefiting from the FERF Project were also interviewed at the EMWF offices in Da Nang City and Dong Ha town in Quang Tri provinces.

The consultant traveled to HCMC and visited the Heart Institute on February 18, 2004, interviewed key staff and examined the facilities and equipment supported by ATLANTIC. On February 19-20, 25-27, and March 3-5, the consultant did fieldwork in Da Nang and Quang Nam project areas, including multiple visits to EMWF, Da Nang City Hospital (visited all renovated wards and new buildings and ATLANTIC supported facilities and interviewed staff and patients/clients in each ward and facility, and interviewed the hospital director and deputy director as well). The consultant

also made visits with EMWF Director Mark Conroy and Deputy Director Ms. Tam and visited board members of EMWF to ATLANTIC-supported renovations at a district hospital and a water project in Quang Nam province, and a renovation of the Hoa Phat commune health clinic in Da Nang City. At the EMWF office in Da Nang City the consultant conducted interviews with clients/patients and families of the EMWF Healthy Heart Program (HHP), the Family Emergency Relief Fund (FERF), and Dr. Paul Wade Project Operation Walk. At Da Nang City Hospital, the consultant visited the new Internal Medicine Building, the renovated Burns/Plastic Surgery Ward and Admin Building, the renovated Surgery Building, Pediatric Building, Obstetrics Building, the new Morgue and Funeral Home Building, the new Water and Waste Treatment Plant, the Oxygen Production Facility, and the new Emergency Care Building. The consultant also visited the Director of Da Nang Health Department and the Head of International Cooperation Department to discuss the new ATLANTIC-supported capacity building efforts for commune and district level health staff of Da Nang City , and interviewed the project officer for the now terminated Physician Education Project.

The consultant visited the Hue Hospital Director's Office, the new Pediatrics Department, and the Cardiovascular and Surgery Departments during the time periods February 23-25 and March 3, to examine the facilities, and to interview a staff and patients/clients from each of the new Pediatrics special wards.

On March 1-3, 2004, the consultant visited Dong Ha town in Quang Tri Province, including the EMWF Project Office, the Quang Tri Provincial Hospital, two commune/ward schools and a water project all supported by ATLANTIC funds. Interviews were conducted with EMWF and Quang Tri Hospital senior staff and health staff and clients/patients at the Quang Tri Hospital wards that were renovated with ATLANTIC funds. In addition interviews were conducted with two patients and their families who participated in the Health Heart Program, also supported by ATLANTIC. The consultant also visited the Kids First Vietnam Rehabilitation and Vocational Training Village and toured all the completed buildings with the Vietnamese project representative from the Quang Tri Foreign Affairs Office and the Delta Construction Company engineer supervisor for the Kids First Village construction project.

Chapter II.

A. Heart Institute in Ho Chi Minh City (HCMC)

a. ATLANTIC-Supported Activities:

The Heart Institute in Ho Chi Minh City is a non-profit organization that provides interventional cardiology and surgical treatment of cardiovascular disease in both children and adults of Vietnam and neighboring countries in Southeast Asia. It was founded in 1990 by Professor Alain Carpentier. The funds donated by Atlantic Philanthropic Services (APS) were used by the Fondation Alain Carpentier (FAC) to purchase the following interventional cardiology equipment, services, and accessories for the Heart Institute in HCMC : (a) Coroskop or C-Arm for diagnostics also known as the cardiac Cath Lab System which also includes monitoring machines and other equipment; (b) hemodynamic equipment; (c) maintenance of the equipment for two years; (d) the cost of disposables for the six month launching period for the interventional cardiology services (see list of disposable items such as catheters, stents, needles, tubes, dyes, etc.). An equipment selection expert committee was formed based on nominations by the FAC, with the committee under the presidency of Professor Jean-Leon Guermonprez, Chief of Interventional Cardiology Services at The European Hospital Georges Pompidou. Three proposals were submitted (by Philips; General Radiology Company ; and Siemens. The committee reviewed the three proposals and selected the Siemens equipment for the following three reasons : (1) the Quality of the product/equipment ; (2) A special reduction of cost of the Siemens equipment, due to the humanitarian nature of the project ; and (3) The equipment maintenance offered by Siemens engineers located in South Asia.

Alain Carpentier and Olivier Liacre of the FAC were both directly involved in moving the Heart Institute project along, and a Dr. Nguyen Ngoc Chieu, Director of the Heart Institute and Dr. Pham Nguyen Vinh, Deputy Director of the heart Institute were the key counterparts to the FAC. Senior APS/Atlantic representatives and board members visited the Heart Institute on different occasions, and Charles Feeney of APS and Alain Carpentier of FAC interacted directly in the early stages of the projects development.

The center at the Heart Institute that has all of the interventional cardiology equipment is called the ‘Cath-Lab’ which stands for Catheretization Laboratory. (See Endnote 1) The cardiac Cath-Lab system equipment was all functioning well at the time of the consultants visit, including the C-arm, monitors and hemodynamic equipment, and the Cath-Lab center was well-supplied with disposable items (e.g., catheters, syringes, stents, balloons, water, robes, solution for sterilization of chords, medicine/drugs) necessary for the various procedures which were being performed daily and with increasing frequency over the project period.

The Heart Institute’s Cath-Lab staff is composed of six physicians working in interventional cardiology, seven nurses, and one technician, compared to the total of 35 cardiologist physicians, 50 nurses, and 10 cardiac surgeons the Heart Institute.

The ATLANTIC consultant visited the Cath-Lab center and toured the facility on February 18th and interviewed the Chief Nurse Cam Ha, the Cath-Lab Technician Mr. Nguyen Loc Think; and two of the interventional cardiologist doctors Dr. Binh Duc Huy and Dr. Nguyen Dong Tuan. The ATLANTIC consultant observed the C-Arm, table and monitors in the main room, the Control room with the HICOR and ACOM monitors, the RECORD CD system, the X-Ray Room, the supplies of

disposables. The equipment was in good operating condition. The Cath-Lab staff reported a maximum number of 12 patients having procedures in one day. The operation theatres are right next door if, during the interventional cardiology, it is determined that a heart by-pass operation is necessary. Dr. Huy said the equipment was very good for coronary angiography and for percutaneous coronary intervention (PCI).

b. Atlantic Budget: \$1,000,000 USD

The Heart Institute is an autonomous, self-supporting organization, and therefore, does not receive any funds from the Vietnamese government. Funds to operate the Institute come from patient fees, private donations, and the Fondation Alain Carpentier (FAC). Vietnamese patients pay half the fees for the various procedures compared to what foreign patients pay. However, poor Vietnamese patients may get further subsidized fees for all or part of the costs depending on need, ability to pay, and financial resources available to subsidize the prices, and the Heart Institute reports that at least one-fourth of the patients are provided partial or full financial support for their procedures. The APS/ATLANTIC funding for the support of the Heart Institute in HCMC did not follow the normal routing process of most of the APS/ATLANTIC regular projects which usually go through the East Meets West Foundation (EMWF). On December 7, 1999, The Fondation Alain Carpentier was awarded an anonymous donation of \$1,000,000 (from the Atlantic Philanthropic Services (APS)), to support the purchase of interventional cardiology equipment for the Heart Institute in HCMC. The FAC's estimated value of the interventional cardiology equipment and accessories and maintenance charges was in excess of \$1,000,000 (i.e., \$1,043,000). However, under the special conditions offered by the Siemens company, all of the above-mentioned equipment and services were provided at a cost of only \$816,558. FAC requested that the money saved from the reduced costs of the equipment and services be used to support the complementary project of the International Medical Center to help generate revenues to go exclusively to indigent children be operated on at the Heart Institute. This was to alleviate the increasing financial burden of indigent patients unable to pay for all or part of the heart procedures, with the reported daily number of indigent patients doubling from 3 indigent patients a day in 1999 to 6 indigent patients a day in 2001. However, without further clarification provided of how the extra funds would be used, the \$183,000 in funds saved was ultimately not expended as the grant expired and the remaining fund balance became null and void.

c. Achievements/Impact

In spite of some initial delays in the implementation of the Heart Institute's procurement of the equipment and training of staff, significant micro-level and macro level impacts of the APS/Atlantic-supported project at the Heart Institute can be documented, both in terms of impacts on the heart patients/beneficiaries and the medical staff at the Heart Institute, and on the reputation of the Heart Institute. As a result of the APS support, the Heart Institute has established high quality world class interventional cardiology services in HCMC. The Heart Institute is now serving as a principal training center for Vietnam for angioplasty and stent procedures as well as heart by-pass operations. The Heart Institute was one of the first two hospitals to have interventional cardiology capability in HCMC, and the first to have both the state-of the art equipment and the appropriate training to delivery quality interventional cardiology services in Vietnam.

As a result of the APS/ATLANTIC support, the 'Cath-Lab' at the Heart Institute has gone from 1-2 patients receiving interventional cardiology procedures per day in the early months of the project, to an average now of 7-10 patients a day having procedures at the Cath Lab. In the normal five-day normal working week at the Cath-Lab, Dr. Vinh reports that there are about 3 angioplasties and 7 angiographies a day, but there are also procedures done for emergency cases on weekends and at night-time. According to the latest annual report statistics prepared by the FAC and the Heart

Institute, during the 20-month period since the installation of the interventional cardiology equipment and training on the procedures by the French cardiology teams in late September 2001 until June 1, 2003, there have been some 1,446 interventional cardiology diagnostic and interventional procedures (e.g., angioplasties and stent procedures) performed at the Heart Institute, including 879 coronarographies (ventriculographies and aortographies); 149 dilatations of patients' mitral valve; 191 angioplasties; and 241 diagnostics of congenital malades (including 225 angiographies; 32 measurements of pulmonary vascular resistance; 25 dilatations of the pulmonary valve; 38 closings of the CIA by amplatzer; 20 closings of the PCA by amplatzer, and one closing of the CIV by coil. In addition to the new interventional cardiological procedures made possible by the APS/ATLANTIC funding, the Heart Institute also performs about 1,200 cardiac operations/surgeries a year, and has approximately 73,500 out-patient consultations per year. Some of the participants from the EMWF Healthy Heart Program in Da Nang and Central provinces also benefit from the heart surgeries, diagnostics, and out-patient consultation services provided by the Heart Institute in HCMC.

The majority of the patients were males and over the age of 45/50 years, with three-fourth of the patients having three or more coronary risk factors. Although it was originally planned to receive clients from neighboring countries such as Cambodia, Laos and Thailand, there have been relatively few clients coming from these areas. Many clients from these countries are reported to go to Bangkok for such procedures, and the richest ones may go to Singapore. According to Dr. Vinh, Vice Director of the Heart Institute about 50% of the patients at the Heart Institute are children and about 50% are adult. However, about 70-80% of the patients of the 'Cath-Lab' are adults and only 20-30% are children. Although some patients at the Heart Institute do come from Cambodia, and some Cambodia doctors and nurses were trained here, only about 1% of the Cath-Lab patients are from Cambodia. However, it was also reported by the Cath-Lab staff during interviews that even an Australian and an American patient used the Cath-Lab for emergency interventional cardiology procedures. Although not Cath-Lab patients were interviewed during the visit, the staff reported that the patients were very happy with interventional cardiology procedures and service.

The Healthy Heart Program of the EMWF in Da Nang, Quang Tri and other central provinces have also sent some of the child patients needing heart surgery for congenital heart defects to the Heart Institute for surgery. However, in recent months, the EMWF has been sending more of the child heart patients to Hue Central hospital, except for the more complex cases requiring special diagnostics and procedures.

Although there was previously Cath-Lab equipment available in one Hanoi hospital and one hospital in HCMC prior to the Cath-Lab established at the Heart Institute (with then anonymous financial support from ATLANTIC), the other Cath-Labs had second hand equipment and lack the level of international training and good maintenance and manuals for effective use of these facilities. This assessment does not attempt to evaluate previous or subsequent Cath-Lab services established in other hospitals, but it was reported that The Heart Institute's Cath-Lab was the first one to fully comply with International Standards for interventional cardiology procedures and operations (in terms of the requirements for (1) high quality equipment; (2) good maintenance; and (3) a highly trained and skilled team.

Capacity within the Heart Institute and among cardiovascular surgeons and cardiologists in other provinces have been enhanced by the Cath-lab work at the Heart Institute. Dr. Vinh and his team have already trained over 100 cardiologists throughout the country on the interventional cardiology procedures performed at the Cath-Lab (personal interview with Olivier Liacre, February 24, 2004).

d. Challenges/Needs

The preparation work took over two years with direct involvement of Alain Carpentier. The interventional cardiology facility was supposed to start work on March 1, 2001, but there was about a delay of several months in getting the equipment in place at the Heart Institute to get the services operational. In September-October 2001 the equipment was all in place and three separate teams of renowned French cardiologists and cardiovascular surgeons visited the Heart Institute in HCMC for about one week each during this time period.

There were some reports from APS/ATLANTIC staff involved in the FAC/Heart Institute project that the FAC/Heart Institute 'moved very slowly' and 'didn't communicate that well', although Olivier Liacre the FAC representative based at Heart Institute worked hard to get the project through, the equipment installed and the training teams in place, and as a result the Heart Institute has greatly increased its capacity and client flow for interventional cardiology procedures.

There were very few maintenance problems that occurred (and virtually none in the first year of the Cath Lab), and when there were some maintenance difficulties Siemens Vietnam and Siemens engineers came in from Thailand to help with the maintenance problem. Dr. Vinh reported that there was only one big maintenance problem that caused some temporary delays in the interventional cardiology services and was a very costly expense that the Heart Institute had to absorb because the X-ray tube that broke down a year after the Cath-Lab was set up was no longer under warranty. It took more two weeks to buy a new X-Ray tube and have it shipped to the Heart Institute and at a cost of approximately \$40,000 that had to be paid from hospital funds. Also, the disposable equipment used for angioplasties and stent procedures can also be expensive, and since the ATLANTIC coverage for these costs only covered the first six months, not surprisingly, since about April 2002 the patients and/or the Heart Institute must cover these costs.

The FAC representative Olivier Liacre was based at the Heart Institute for about five years, but left more than a year ago and has not been replaced by another FAC person based at the Institute. Jaques Bizot now is the FAC person overseeing the Cath-Lab activities from his base in Paris and Professor Alain Carpentier makes two visits to the Heart Institute every year. There was insufficient time and scope for the ATLANTIC consultant to evaluate the current management process for the Cath-Lab and its maintenance and operational effectiveness. Olivier mentioned that the work in setting up and implementing the Heart Institute Cath-Lab was difficult and slow at times and it required being diplomatic, but it was successfully established and meets international standards..

In terms of future plans and needs at the Heart Institute, Dr. Vinh expressed the emerging need to develop more electro-physiology capacity for cardiac arrhythmia (e.g., pacemakers and radio frequency ablation; and putting catheters inside the heart to diagnose arrhythmia and treat it). The Heart Institute needs more equipment (approximately \$ 250,000 for new equipment that you could use with the existing angiographic equipment). Dr. Vinh also expressed the need for some of his staff to receive special training in the above-mentioned special area in either France or Australia for up to six months or a year. Dr. Vinh said there are only two hospitals in Vietnam that can do these procedures now in Vietnam (Thon Nhat Hospital in HCMC and Bach Mai Hospital in Hanoi).

Dr. Vinh mentioned that in the future it would be better to have direct help and support from ATLANTIC, because the process and communication before was slow.

e. Financial Leverage and Other Benefits

There was no report, by the Deputy Director of the Heart Institute Dr. Pham Nguyen Vinh or the former FAC representative Olivier Liacre, of other substantial financial support being offered to the Cath-Lab or related services at the Heart Institute by other donors since the initiation of the ATLANTIC-supported project with the FAC. However, the Heart Institute has steadily become more established as a Center for Excellence for interventional cardiology in Vietnam and for training doctors from other hospitals in HCMC and from other provinces in Vietnam. For example, a number physicians and/or lab technicians have been trained in interventional cardiology techniques (angioplasty and use of stents) and the use of the C-Arm and monitoring equipment (e.g., medical teams from Nguyen Trai Phuong Hospital, Hospital 115; Nhi Dong 2 Children's Hospital, Trung Vuong Hospital in HCMC). These were the 3rd, 4th, 5th, 6th and 7th hospitals in HCMC to receive Cath-Lab equipment and training in 2002-2003 after the 1st hospital Cho Ray Hospital (in 2000), and the 2nd hospital The Heart Institute received the Cath-Lab equipment training in 2001. The Cath-Lab team at the Heart Institute received no payment from the teams from the other HCMC hospitals who came to the 'Cath-Lab' at the Heart Institute. Dr. Vinh said 'The French helped us, we need to help others'.

The consultant was not able to contact the FAC to evaluate how the balance of \$183,000 to the ATLANTIC grant was utilized. There were some unconfirmed reports that some Heart Institute/International Health Clinic funds (and possibly FAC funds ?) have been used to help subsidize funding for a number cardiological diagnostics, procedures and surgeries for indigent patients. Some FAC funds have been used for training of two Vietnamese cardiologists at the Heart Institute (Dr. Do Quang Huan and Dr. Huynh Ngoc Luong) in France over a 12-month period at Broussais Hospital in Paris under the direction of Professor Guermonprez during the December 1999 to April 2001 time period, and one Vietnamese Head Nurse Nguyen Cam Ha of the Interventional Cardiology Unit at the Heart Institute also received two-months training at the same hospital (in coronaries, congenital heart disease, and angioplasty) and the two doctors received some additional six months of training at the Hospital Georges Pomidou as well. In addition, to assist Dr. Huan, Dr. Luong and other cardiologists at the Heart Institute when the catheterization laboratory first began its activities on September 20, 2001, two medical teams of prominent French cardiologists and surgeons worked at the Heart Institute during the period from September 20 – October 15, 2001 to train and build capacity of the 'Cath-Lab' staff. The French cardiologists included : Dr. Francois Ledru and Dr. Kamel Boughalem of the European Hospital Georges Pompidou, and Dr. Francois Bouchart, the Center Hospital of the University of Rouen. The French surgeons included Professor Yves Logeais, Center Hospital of the University of Rennes, and Professor Soyer of the Center Hospital of the University of Rouen. Dr. Vinh reported that the ATLANTIC money was used to pay for the air tickets and per diem costs of the visiting French expert medical teams, but they came as volunteers and so their time and salaries were valuable contributions to the project (which was likely to be worth thousands of dollars for the days and weeks of work they contributed during their training visit). Dr. Vinh reported that some of the Interventional Cardiology Unit 'Cath-Lab' staff received some training in Thailand as well.

Dr. Vinh reported that Heart Institute used its own money to pay for the costly renovation of the Cath-lab rooms, and not the Fondation Alain Carpentier (i.e., ATLANTIC money). Dr. Vinh said they also bought some hemodynamic instruments that they must have for monitoring (e.g., to measure pressure, oxygenation, blood flow, and saturation).

Dr. Vinh reported that there is a 'Social Fund' that helps poor patients to cover the costs of interventional cardiology procedures, with funds reportedly coming from the Fondation Alain Carpentier and Vietnamese organizations and individuals.

The French Organization 'Terres Des Hommes' has proposed providing financial support for heart procedures/operations for five needy patients (but no money has been received yet). Dr. Vinh also reported that EMWF sent some poor heart patients to the Heart Institute two years ago for treatment (about 6-8 people), but that now EMWF mostly sends the poor patients to Hue Central Hospital. Dr. Vinh pointed out that some of the heart surgeons and cardiologists at Hue Central Hospital were also trained at the Heart Institute, but not in the Cath-Lab procedures.

The Heart Institute has built a new clinic patients area in late 2002, for patients to stay for 1 to 3 days, as 24-hours are required for stabilization of the patient before the Cath-Lab procedures, one day for the procedure, and a day for post-procedure observation and care.

It was also reported separately by EMWF in Da Nang that EMWF Health Heart Program funds (partially supported by ATLANTIC) have been used to subsidize child heart patients to go to the Heart Institute in HCMC for diagnostics, treatment and rehabilitation.

Findings:

1. The ATLANTIC support for the cardiac Cath-Lab System has enabled the Heart Institute to established a modern state-of the art center for interventional cardiology procedures such as angioplasties, dilatations and stent procedures, which has been complemented by high quality on the job training provided by French cardiologists and cardiovascular surgeons at the Heart Institute and at renowned French hospitals.
2. The average daily number of patients benefiting from the interventional cardiology procedures provided by the Cath-Lab at the Heart Institute has increased fairly steadily over the project life from about 1-2 patients per day in the beginning to about 7 and as many as ten a day in recent months
3. The Cath-Lab has become an established training center for cardiologists from other hospitals in HCMC and other parts of Vietnam. Since the initiation of this projects at least three other hospitals in HCMC have undertaken similar efforts to provide interventional cardiology procedures at their hospitals with some of their staff receiving training at the Heart Institute.
4. The Cath-Lab equipment continues to be functional, and equipment maintenance and disposables are continuing to be sustained through the Heart Institute's operational budget and cost-recovery from patient fees, as of late February 2004 (or more than six months after the two-year maintenance support provided by ATLANTIC funding finished).
5. Although the project was delayed a few months, due to delays in the delivery of the equipment, the high quality of the equipment, proper maintenance, complemented by excellent training support and an adequate and increasing patient flow to use the services, help to ensure a successful implementation of the project.

f. Recommendations

The project has been successful and achieved a number of important objectives. No further supplementary support is immediately necessary.

1. Any possible future ATLANTIC support in this area should be based on a clearly defined national strategy for ATLANTIC/Vietnam's future support for health interventions and care relating to heart disease. If future ATLANTIC support in this area is deemed to be a priority, efforts could concentrate on supporting in-country training and international training trips for Vietnamese cardiologists and cardiovascular surgeons and nurses working in this field.
2. The linkage between The Heart Institute and the EMWF's Health Heart Program should be continued and strengthened, especially for referrals and follow-up for complex HHP cases, at least until the new Cardiovascular Center in Hue is constructed and becomes fully operational.
3. There should be continued communication and coordination with the Hue Central Hospital as it develops the soon-to-be-build Cardiovascular Center (CVC), and becomes increasingly more involved in the EMWF's HHP for patients from the central provinces.

B. Da Nang General Hospital and East Meets West Foundation

Since 1999 the East Meets West Foundation (EMWF) has provided substantial support in the Renovation and Upgrading of a number Buildings, Departments and wards with funds provided by ATLANTIC. This section reviews the ATLANTIC-funded EMWF work to upgrade the Da Nang City Hospital facilities for the 1999-2004 period, including the upgrading of the Pediatrics Wing, the Burn-Plastic Surgery and Admin Library Building, the Obstetrics Department, the Surgery Building, the Water and Waste Treatment facility, and the construction of the new Internal Medicine Building, the new Morgue and Funeral Home Building, the new Emergency Care Building (construction currently underway), the planned Multi-Purpose Medical Building, and other improvements and upgrades to the hospital, such as provision of the equipment and facility for Oxygen production, improvement to the drainage of the roads and grounds, provision of medical equipment, and the more-limited support for medical staff capacity-building/training.

EMWF is responsible for supervising/overseeing all of the renovations and new constructions, working together with architects and construction contractors and the hospital staff for planning and completing the work, and then turning the upgraded facilities and new buildings over to the Hospital management and maintenance departments. EMWF calls this their “turn-key” policy which they do in all of their projects.

This section documents the amount of financial investments made and expended, the activities completed, the major achievements as well as difficulties encountered (and that may still persist) and the needs for the future, and the micro- and macro impacts of the ATLANTIC-supported hospital improvements have had the medical services, quality of care, patients satisfaction, patient flows as well impacts on the hospital staff who are also benefiting from the hospital improvements. This section also exams any additional leverage that may have been gained, resulting in other donors/benefactors contributing to improvements of the facilities, equipment, staff skills, and quality of services provided at the hospital and specific wards and departments.

Da Nang City Hospital: Achievements

Da Nang City Hospital is a busy government hospital located in the heart of Da Nang city, with over 50,000 inpatients attending the hospital 2003, and the largest hospital in the central region below Hue. There are over 900 medical staff (including the board of directors), and over 200 doctors of which about 149 have received postgraduate training, 398 nurse, and 120 health aids. The population of Da Nang City is now estimated to be over 700,000 inhabitants, and neighboring Quang Nam province (who send many complex patient cases to Da Nang City Hospital) currently has a population of over 1,400,000 inhabitants. The Da Nang City hospital has the responsibility for conducting examinations and providing treatment in a catchment areas including 21 million people living in the surrounding 16 upland and coastal provinces. Although there are 760 officially approved hospital beds for which the government bases its funding support to the hospital, there are actually some 1095 actual hospital beds (with 900 new beds provided by EMWF using ATLANTIC funds). With the increasing number of inpatients each year, there are often many more inpatients staying in the hospital than actual beds available, leading to the continued need to have two and even sometimes three patients share a bed during their stay. Patients are often referred to Da Nang from clinics and smaller hospitals in neighboring areas. It is generally relatively cheap to stay in Da Nang City Hospital, but waiting times for services can be long. The doctors are good and hygiene has improved remarkably, helped by the hiring of an independent cleaning company to clean the entire hospital daily.

In addition to the new constructions and renovations of hospital buildings, to improve the outside drainage, EMWF had the roads raised, put in concrete roads and drainage, and put in plastic tubing to put electric lines underground. Before some roads were unpaved and in the back of the hospitals some areas of the road would fill with a meter of water during rainy season.

One of the major achievements of the Da Nang City Hospital is that the hospital was upgraded by the government of Vietnam's Ministry of Health (MOH) to a Level 1 hospital (highest level) from its previous Level 2 rating, after the Hospital's new 7-story Internal Medicine was completed in November 2002. The Da Nang Hospital is now providing all levels of care and is serving as a regional training facility for medical staff in the region, especially for some medical specialty areas. Hanoi University now sends some of its students to Da Nang hospital for training. Da Nang City Hospital still answers to the Da Nang People's Committee and rely on them for their operating budget, whereas in the case with Hue Central Hospital, Hue Hospital relies on the national MOH for their budget and supervision. It is generally considered to be much easier to work with the local PC authorities on issues of the hospital's budget, then to rely on the national MOH authorities up in Hanoi.

There has been a dramatic increase in the number of inpatients, examinations, and surgeries at Da Nang City Hospital during the 1998-2003 period. Figure 1 (back of the report) shows the number of inpatients increased steadily from 30,144 in 1998 (two years before the renovations and construction) up to 50,347 in 2003, or a 67 percent increase in five years.

The Da Nang City Hospital Director Dr. Chien said in an interview with the ATLANTIC consultant that as a result of the ATLANTIC-supported renovations and new constructions and upgrades "the hospital has changed nearly totally". Dr. Chien said that the number of patients coming to the hospital for various services has been increasing rapidly, which is confirmed by the hospital statistics provided for the 1998-2003 period. Dr. Chien also said that patients using the hospital now tell others in their communities that the hospital is in very good condition. Interviews conducted with patients in various wards during the ATLANTIC consultants visits to the various renovated wards and new building confirms Dr. Chien's statement, with many patient respondents saying they heard about the hospital improvements from others who had visited the hospital recently, which motivated them to come to the hospital for services as well. Patients who reported they had used the hospital wards both before and after the renovations very frequently reported that the wards are now much more clean, light, spacious, and more convenient than before (e.g., bathrooms in patient rooms; larger and better beds). As one respondent said "even the taxi drivers know the hospital has improved".

One of visiting physicians participating in the ATLANTIC supported-project Operation Walk stated that the doctors at Da Nang City hospital were happier working at the hospital with the new/renovated facilities and a better working environment, better lighting, easier to clean wards, and better maintenance. However, it was also mentioned by the above respondent that case turnaround was still slower than it should be due to shortcomings in management, cumbersome centralized top-down bureaucratic procedures and decision-making. There was also a positive response on the part of patients to have foreign doctors working at the hospital, with the perception that the patients will get better results.

Da Nang City Hospital: Challenges/Needs

Dr. Chien mentioned there were four private hospitals in Da Nang City and four more planned. He mentioned they are building a Police hospital (across the river), a Post Office hospital, a Business

hospital, a Surgery hospital (50 beds), a People's Committee hospital (just started), and the Hoang My Hospital (150 beds). At the Da Nang Health Department visit with Dr. Trinh Luong Tran and Dr. Truong Bui Huu Tri mentioned the plans for constructing a large regional hospital across the river (I saw the hospital model plan), but there are currently no funds for the new regional hospital project yet. It is not clear how the growth and plans for hospitals in Da Nang City corresponds to projected demand for health services or the current supply and capacity of health care professionals in the Da Nang City area.

Da Nang City Hospital: Leverage

During the ATLANTIC-supported renovation and new construction project period at the Da Nang City Hospital, may have gained leverage with a number of other donors and organizations who have made contributions for supplying medical equipment (e.g., JICA (Japan); ASSORV (French); Catherine de Scienne (French)); Upgrading of the common block for ENT-OMF-Ophthalmology (Da Nang's Foster's Ltd); Establishing an Infertility Clinic and supply of Ultrasound machine (UNFPA); and Renovation of the Water Supply System (Donzy (French)). The Government of Australia gave dental equipment in 2003. The Da Nang People's Committee has also offered to provide interest free loans to the hospital to purchase hospital equipment. The People's Committee has bought some of the equipment for the hospital (e.g., they built the surgery operation theatre wing). The JICA team visited the Da Nang City Hospital from February 19-March 2, 2004 to finalize a project to provide \$3-\$5 million dollars in medical equipment to hospitals new buildings and renovated wards and departments.

Hue Central Hospital has followed the Da Nang City Hospital model of contracting out a cleaning company (Hoan My company) to clean the hospital.

All of EMWF health sector construction projects save lots of money from the benefit of tax free status on import duty tax and VAT. Much money is saved in the EMWF construction projects by using cheap but reliable locally produced materials, relatively cheap local labor, and buying duty free imported higher quality materials that are needed (such as Air conditioners, elevators, oxygen equipment, glass, some windows and doors, etc.).

EMWF purchased with ATLANTIC money the Oxygen producing equipment (e.g., the oxygen generator, etc) for the Da Nang City Hospital for \$120,000. This saves the hospital about \$15,000 dollars a year (saved by not having to buy oxygen from outside sources). The oxygen now goes straight to the building. This capability was included as part of the building renovations initiatives. The hospital also can sell oxygen it produces to other hospitals and clinics.

Since the EMWF renovations of the Da Nang City Hospital, other non-governmental organizations and individuals have provided professional technical support and equipment for the Pediatrics Department (the German organization Malteser; the Assembly of God group from Australia) and the Burn Center (Operation Smile).

Da Nang City Hospital: Relations with EMWF and ATLANTIC funding

Dr. Chien had the following to say: "Thanks to ATLANTIC support through EMWF we now have a good facility and a model to serve the patients. Especially to Mark Conroy who comes everyday to help with construction and has a close relationship and works intensively to make it a reality. Government representatives from MOH and MPI came last month and praised the buildings and the changes in Da Nang City Hospital. This is a very efficient project, there has been a big change when compared to what it was like before. The buildings are all well-built." Dr. Chien also mentioned

that during the MOH's visit to the hospital, the Minister of Health Madam Chien recommended that other hospitals should come and see the Da Nang City Hospital as well. Some of Mark Conroy's comments were "The changes are remarkable, not just in the building, but in the services, and the staff's attitudes and management."

Da Nang City Hospital: Recommendations

1. Before additional ATLANTIC support for Da Nang City Hospital improvements is provided, a careful examination of the future plans for the Da Nang City Hospital should be made as well as projections of future demand for patient health services and needs for professionally trained health staff.

1. Pediatric Department Renovation (A & B) and Renovation of the Burn –Plastic Surgery and Admin Library Building

a. ATLANTIC Supported Activities

The project proposal and feasibility study for the renovations of the **Pediatrics Department** and the **Burn Center-Plastic Surgery Departments** and **Admin Library Area** were submitted in September, 1999. Approximately \$235,000 in ATLANTIC funds were dispersed to EMWF in 1999 to begin work on the renovations, and an additional \$66,000 in ATLANTIC funds were dispersed EMWF in 2000.

Renovations all of the medical buildings having in-patients have included tiling the floors and walls, putting in new doors, roofs and windows, and sometimes adding an additional floor (e.g., a fourth floor on the Pediatrics building), putting in more bathrooms with stainless steel fixtures, beds, trolleys and trays, providing bed sheets, ceiling fans, air-conditioners, and reconfiguring the patient room space, procedure rooms and reception areas, and providing additional furniture as needed. For more information on the hospital new constructions and renovations supported by ATLANTIC, also see ATLANTIC consultant John Troha's Evaluation Report on the details of the hardware "bricks and mortar" aspects of the new constructions and/or renovations done to these buildings in Da Nang City Hospital and his evaluation assessments of structural, architectural, and engineering aspects of the renovations completed (see John Troha Draft Report "Central Region of Vietnam Hospital Study, April, 2004). John Troha's report will focus on the actual building construction process, physical condition of the buildings, supervision and maintenance, and functionality the building/renovations.

Most of the buildings were fitted with direct oxygen supply outlets in the Intensive Care Units and some patient wards, making it no longer necessary to carry big oxygen tanks in and out of patients rooms when oxygen was needed. EMWF also used ATLANTIC funds to install the Da Nang City hospitals own oxygen production facility which is capable of supplying all of the oxygen needs for the hospital and extra oxygen production which can be sold to other hospitals and clinics as a source some additional income generation for the hospital.

b. ATLANTIC Budget:

Proposed Budget: \$300,000 USD (\$100,000 (Pediatrics A); \$100,000 (Pediatrics B) and \$100,000 (Burn-Plastic Surgery and Admin Library Building))

Expended Budget: \$300,926 USD (1999-2001)

Renovation Completion Date: January 31, 2000

c. Achievements/Impact

The renovations were completed without excessive delays and within budget and in an economical manner without compromising the quality of materials used and work done. When necessary EMWF and its contractors used imported quality materials for the renovations, taking advantage of EMWF's duty free status. When decent quality local materials could be used, EMWF and contractors did so, ensuring to not compromise the quality and integrity of the renovation work.

In terms of demographic impact, EMWF reported a total of 15,000 patient beneficiaries within the first year after the renovations of the two buildings, and this number has continued to rise each year patients, family and staff use these renovated facilities. The ATLANTIC consultant for this report interviewed a small sample of staff and patients/clients using these renovated facilities and received the following feedback from them.

At the renovated **Pediatrics Department**, the Head of the Department was interviewed. There are now 150 actual beds in the Pediatrics Department, but they usually have between 180 and 220 children in beds, so there is still a lot of doubling of two children in a bed. The head doctor reported that the renovated facility was much better, cleaner, brighter, the new beds are bigger and you can put two kids in a bed much more easily than the old rusty iron beds. Each patient room has cabinets, better toilets, consistent electricity, and water. She says the staff are very happy with the cleaner more comfortable working place. "They even have a private place to read books after seeing patients. Because this Department was one of the first to get renovated the renovation budget was not so big compared to subsequent renovations and new buildings. For example, there was no elevator put into the building. Figure 2 (in the back of the report) shows that the number of inpatients to the Pediatric Department more than doubled between 1999 (4,512 inpatients) and 2003 (9,435 inpatients). There is a large playground room for children on the fourth floor which was clearly being used by patients and their families, and there is also a kitchen where you can cook special foods for severe patients. The ATLANTIC consultant interviewed the mother and father of a 15-month old patient in the Pediatrics ward who had come from Quang Nam province 40 kilometers away, and who had been in the hospital for 20 days already with convulsions and rickets. The parents said they were comfortable here and that the doctors provided good services.

The **Burn and Plastic Surgery Center** and **Admin Library Room** were renovated at the same time as the Pediatrics Building in 2000, and with similar improvements to the facilities. At the time of the ATLANTIC consultants visit there were 15 officially authorized beds, but 18 actual beds, and a total of 22 in-patients staying in the Burn Center. New aluminum doors and windows were installed, tile walls and floors, new ceilings and fans, new toilets and sinks for patient rooms, beds, trolleys and office and patient room furnishings. To provide more space, during the renovations they also closed the second floor balconies and put a hallway in the middle. In an interview by the ATLANTIC consultant with a staff nurse (working at the Hospital for 31 years) at the burn center reported statistics showing that since renovations, the number of in-patients more than doubled from 243 in-patients in 1999 up to 503 in-patients in 2003. Since renovations there are more patients coming in for surgical repairing of scar tissue and skin grafts, whereas in the past the hospital staff used to leave the burn scars without trying to make them look much nicer or less confining. The Burn Center nurse said "If you had seen the building before, it was so dark and dirty. It is now much cleaner and brighter, furnished with stainless steel beds and cabinets". The ATLANTIC consultant interviewed one Burn Center patient (a 49 year-old fisherman from Quang Ngai province who was severely burned when his kerosene lamp exploded while he was refilling it). The patient had his own bed to himself. Quang Ngai hospital was not able to treat him and had referred him to Hanoi or HCMC for care, but that was too far for him to go so he came to Da Nang City Hospital. The patient

had to stay at the Center for one more month to have two more surgeries and skin graft. The patient said the Center was clean, comfortable, he had his own bed and he was able to order food from the hospital.

There were both visual and reported dramatic physical improvements in all of the mentioned renovated facilities. Prior to the renovations: the roofs leaked and were heat absorbent, the wood roof was worm-eaten and doors were damaged, the cement floors were old and hard to clean; patient rooms were very crowded and there few (if any) places for isolating severe cases; hospital beds were bent, twisted, dilapidated, and in need of paint and mattress replacements too; there were fewer toilets and the water system was totally degraded; ferric drains were rusted and sanitary equipment broken and/or outdated); there was very poor ventilation and almost no air-conditioning leading to high humidity in the buildings. These conditions were all corrected during the renovations. The renovated buildings were also easier to keep clean and better maintained by a contracted cleaning company that cleaned areas twice daily. Prior to renovations all of the wards being renovated were darker, harder to keep clean, less well ventilated and more crowded. The renovations took care of these problems, although with the increased client flow to the wards, some patient wards continue to be crowded with more than one patient sharing a bed during busy periods.

The renovated first floor **Administration Room and Library** look very nice, functional, are being used by the hospital staff and are well-furnished with reception counters, cabinets, tables and shelves, which appear to be well-maintained. The Library collection of books and journals is growing. However, it was not possible for the ATLANTIC consultant to determine in the limited time available how often the library materials were updated and the extent to which the Library reading materials were donated materials or purchased by subscription, or what funding source paid for the purchased materials.

Important lessons were learned by the hospital, EMWF and the contractors in doing the first four renovations, including the Pediatrics Department and the Burn Center-Plastic Surgery Center and Admin/Library Wing.

d. Challenges/Needs

The **Pediatric Department** staff first felt lucky to be one of the first buildings to be renovated, but later felt unlucky when they observed the new buildings and more substantial renovations that were subsequently provided to other hospital wards and departments.

The Head of the Department said she wanted no more renovations, but rather a new building now, since the building is old now (built in 1968). She mentioned that the concrete floors, although now covered in tiles, still leak, and when it rains water comes inside from the balconies. She also mentioned that although some windows have been darkened, the sun and heat still can come in, and that the patient rooms are still not large enough, and that there were still not enough toilets. (Note: Mark Conroy had at some earlier point asked the head of Pediatrics Dr. Cong if they wanted more toilets, but they declined the offer).

The ATLANTIC consultant noticed the use of space in the Pediatric ward was not the most efficient, with patients crowded into a few rooms and other rooms be set aside on the upper floor for a few students and staff to use. In addition, in the interview with Mr. Troha who was evaluating the construction plans and work for the health facilities, Mr. Troha also mentioned how crowded the Pediatrics Department still was at Da Nang City Hospital and that the top floor was holding records for the entire hospital, when medical records were planned to be kept on the second floor of the Morgue Building. Mr. Troha also mentioned seeing 3-4 kids per bed in the pediatrics ward of Da

Nang City Hospital (after the renovations), and that medical school students and teachers were living on the fourth floor of the Da Nang Hospital Pediatrics facility.

The pediatric patients rooms were crowded and hot with too many children sharing too few beds. There was at least one bed observed with three children staying in it, with only a straw mat over the stainless steel bed, rather than a mattress across it, and family members had to take shifts in staying in the bed and resting with their sick children. Some parents of patients complained that there were not enough toilets for them. Part of the new 4th floor of the Pediatrics Department was reported have stored all the old hospital records, which Mark Conroy considered to be a wasted use of a beautiful room. Mark Conroy thought such files could be stored on the second floor of the new Morgue Building, which was originally planned to hold hospital records. This could free up more room in crowded Pediatrics Department. The medical students living on the 4th floor of the Pediatrics could also move to the dormitory on the first floor of the old Surgery Building.

The **Burn Center** wants more space and they expressed the need for some heaters for some patient rooms. The Burn Center staff would like to have more rooms added for skin surgery and they want the patients to stay longer for follow-up observation and treatment. The Burn Center has also asked for furniture for the staff, but they have not received it, only furniture for the patients.

Both the Pediatrics Department and the Burn Center were grateful for the initial assistance from EMWF/ATLANTIC for the renovations, but admitted feeling a bit jealous of the other departments who later received much larger renovation budgets or entirely new buildings.

When a contractor finishes the work they are paid 95 percent of the budget, with 5 percent set aside for (warranty) maintenance for a period of one year after the renovation or new construction. Ms. Tam of EMWF said that EMWF asks the hospital for a list of things to repair at the end of the one year period, the contractor then fixes the items, and if the hospital is satisfied, then EMWF provides the contractor the remaining 5 percent. There was no ATLANTIC money allocated back then (2000) for purchasing medical equipment.

e. Leverage and Other Benefits

Other international non-governmental organizations have begun providing support and supplies for pediatric programs in the **Pediatric Department** (e.g., Australian Assembly of God organization gave a donation to equip the playroom/ and play areas with toys; the German organization Malteser provided furniture, such as tables, refrigerator, gas stove, and kitchenware for the new kitchen located on the ground floor, where mothers are taught about nutritious meals with funding that began in 2004. The Pediatrics Department also received some training from Royal Children's Hospital in Australia. The Japanese organization JICA has recently promised to replace old equipment (10 years old or older), e.g., respirator/ventilator and incubators.

Prior to the ATLANTIC-funded renovations of the **Burn Center** the only volunteer international support for the Burn Center was from a Belgium doctor who visited the Burn Center periodically. However, Operation Smile began working with the Burn Center after the renovations at the end of 2000 and a Japanese group began coming to assist the Burn Center beginning in 2002. The renovations have made the Burn Center a much more attractive place to work, both on the part of Vietnamese staff and international health professionals and organizations who volunteer their time and resources to help the Burn Center.

f. Recommendations

1. The Pediatrics Ward should consider moving the hospital records stored on the newly added fourth floor to the new Morgue Building second floor which has been designed and designated as a hospital record storage/filing room. This would free up more space for the pediatrics patients who are still very crowded in the patient rooms.
2. The Pediatrics and Burn wards may need some extra fans (for the hot summer months) and a few heaters (particularly for the burn ward during the cool season). These items are not on the hospital medical equipment request list that JICA is planning to fund.

2. Surgery Building and Intensive Care Unit Renovation

a. ATLANTIC Supported Activities

EMWF renovated the Surgery Building which was completed in late December 2000, which also included an Intensive Care Unit (ICU) and Post-Surgery Unit. There was one Operation Theatre Building that ATLANTIC did not renovate which was built about six years ago. In addition to renovating the doors, windows and tiling the floors and walls, the renovations also included putting in an elevator and putting in new toilets, sinks and showers for the patients and staff. Some of the surgery units and ICU activities have been moved to the new ATLANTIC-funded Internal Medicine Building of Da Nang City Hospital.

b. ATLANTIC Budget

Proposed Budget: \$750,000 (December 1999: Funding amount is for both Surgery Department and Ob-Gyn Department renovations)

Expended Budget: \$766,095 (For both the Surgery Department (\$444,981) and the Ob-Gyn Department (\$321,214) renovations)

c. Achievements/Impact

In recent years there has been a dramatic increase in the number of surgeries performed at Da Nang City hospital, especially since the completion of the renovations of the surgery building. Figure 5 shows that between the years 2000 and 2003 the annual number of surgeries increased from 7,366 to 10,115, a 37 percent increase in three years. With the completion of the new Internal Medicine Building as well in late 2002, three of the surgery units moved to that building, further increasing the space and capacity for the surgery department to provide surgical services at the Da Nang City Hospital.

The ATLANTIC consultant toured the renovated surgery building on February 26 2004, and interviewed one staff member of the surgery department (Dr. Huynh Phien, the head of the orthopedic surgery division on the second floor) and one patient (a 23 year-old male patient who had recently had surgery on his leg following a traffic accident). Dr. Phien said three of the surgery groups have moved to the new Internal Medicine Building. The Surgery Department is now planning to have a rehabilitation center upstairs. When the planned Multipurpose Building is finished they will move the Rehabilitation Center from the Administration Building to here (Surgery Building). Half of the renovated first floor is taken up by the MRI unit, and the other half is a dormitory for

medical students/interns and for parents of patients. The second floor includes the orthopedic surgery division. The renovated third floor of the Surgery Department includes the Oncology and Tumors units. It was difficult to get trend data on surgeries performed because the different surgery divisions were now split up about two years ago and are located in various parts of the hospital and not all in one place as before. Dr. Phien said that the number of surgery patients has increased 3-4 times. The orthopedic surgery division has 35 official beds, but 55 actual beds, and there were 63 in-patients on the day of interview, so doubling-up of patients two per bed was observed in the Surgery Building, as in the other hospital departments.

Dr. Phien reported that before the renovations they had a bad building that was not clean and that the rate of infection of surgery patients was higher then. Dr. Phien said that the Chief Nurse has data that shows that the infection rate has gone down. (Note: the Chief Nurse was not at the Hospital on the day of the interview because her mother had died that day). Dr. Phien said that the renovations have made working conditions better, the patients have better beds, new sheets, the stainless steel beds and plastic mattresses are easier to clean, there are now elevators and they are working well for both patient and staff use, they have water and electricity all the time now, the patients have private toilets in each patient room which is much more convenient for them.

d. Challenges/Needs

No specific challenges or needs were identified during the relatively short visit and interviews with the surgery staff and patients.

e. Leverage and Other Benefits

The new internal medicine building has provided extra space for some of the surgery units to move into. When the multi-purpose building is completed at Da Nang City Hospital, the rehabilitation department will move from the old administration building to the renovated surgery building.

f. Recommendations

1. With the surgery department various units now divided between the surgery building and the internal medicine building, more efforts will be needed to collate all of the surgery data from the various units, and to ensure that good cross-unit communication and information sharing, supervision, surgery training, and quality assurance are maintained across all surgery units, regardless of their location.
2. The ATLANTIC consultant endorses Dr. Paul Wade's recommendation that the surgeons at Da Nang City Hospital receive quality up-to-date or brand new hand-held surgical instruments, proper brushes for cleaning instruments, and other supplies. Efforts should be made by the hospital to see if the JICA grant to be awarded for providing medical equipment can include funds for procurement of these items.
3. The surgical units medical staff need to reinforce the need to follow universal precautions procedures for infection prevention, and to ensure that medical staff and custodians responsible for cleaning operation theatres and equipment actually follow proper room cleaning and equipment sterilization procedures.

3. OB-GYN Department Renovation

a. ATLANTIC Supported Activities

The building was renovated and a 4th floor was constructed. As with the other renovations, new bathrooms, tiled walls and floors, new doors and windows, and new beds, cabinets, stretcher/trolleys, ceiling fans, sheets, trash bins, etc. were provided during the renovations. The Ob-Gyn ward is currently configured as follows: 4th floor - Administration and conference room and infertility center; 3rd floor - Medical Gynecology, Surgical Gynecology, Post-operative ICU; 2nd floor - Division of Treatment, New Born Care, Post-Natal Care; C-Section Care; 1st floor Labor and Delivery and minor surgery. The work was finished in December 2000.

b. ATLANTIC Budget

Proposed Budget: \$750,000 (For both Surgery Department and Ob-Gyn Department renovations)

Expended Budget: \$766,095 (For both the Surgery Department (\$444,981) and the Ob-Gyn Department (\$321,214) renovations)

c. Achievements/Impact

Renovations included adding a fourth floor to the building, putting in tiles on all the walls and floors, repairing the windows and doors, putting in an elevator, a new roof, putting in furniture, cabinets, counters, ceiling fans, wall vents, beds, fixed latrines and toilets, put in medical gas (oxygen), etc. Work was completed by December 2000. The Chief Nurse of the Ob-Gyn ward and one patient (a 35 year old patient delivering her second child) were interviewed at this renovated ward on February 26, 2004, with Ms. Tam of EMWF serving as the interpreter. The Chief Nurse interviewed that although the official number of beds is 160 beds, they actually have 212 beds in the Ob-Gyn ward. Figure 4 (in the back of the report) indicates that the number of inpatients, deliveries, and Ob-Gyn surgeries have nearly doubled in the ward from 1998 to 2003, going from 6,133 total Ob-Gyn inpatients in 1998 to 10,001 total inpatients in 2003 (63% increase), from 3,422 deliveries in 1998 to 6,356 deliveries in 2003 (86% increase), and from 2,162 Ob-Gyn surgeries in 1998 to 3,771 Ob-Gyn surgeries in 2003 (75% increase).

The 4th floor is designated one-half for administration and one-half is an infertility clinic. UNFPA provided additional financial support for the establishment of an infertility services program which started in July of 2000. As of March 2004, 161 couples had been treated for infertility, with a total of 100 babies being born. They do IVI cleaning the sperm and also do tubal clearing techniques.

The Chief Nurse for the ward reported that the rooms are much cleaner after the renovations, people have a place to change clothes, every patient room has a toilet which is much more convenient for the patients; the staff work space is also much better; the ward is more comfortable with more open space; however, the two ACs from the conference hall on the fourth floor were taken out and put in the two ultrasound rooms, so now the conference room is very hot on the 4th (top) floor; EMWF (with the Atlantic funds) provided beds, cabinets, etc. that are stainless steel and easy to clean; an intercom was also provided by EMWF so information comes to the patients regularly and in time; the floors were terrible and broken before the renovation, now the floor is easy to clean; the hired cleaning company that cleans all wards in the hospital at least twice a day has really helped keep the ward and the hospital clean; after four years since the renovation the paint is still good; the plastic signs that were made are better and more long lasting than the old wood signs; the 10% of patients

that come to the ward from neighboring provinces especially like the Da Nang Ob-Gyn ward. The nurse said the temperature is okay now but it can get very hot still in the summer (up to 38 degrees sometimes).

The one client from Dai Loc District (35 kilometers away) who was interviewed in the Ob-Gyn ward said she heard from many people in Dai Loc District who came here to have babies that the hospital is very clean. She said two mothers and children per room is better than 3 to 6 mothers and children, because it is noisy with the babies.

d. Challenges/Needs

Because of the continued rapid increase in the number of Ob-Gyn patients and deliveries in the Ob/Gyn ward since the renovation crowding and doubling-up of maternity patients is still occurring. In addition, the added 4th floor is reported to very hot in the summer, particularly after moving the two ACs from the 4th floor conference room to put them in the two ultrasound rooms.

e. Leverage and Other Benefits

The renovations and new fourth floor of the Ob-Gyn Building funded by ATLANTIC provided the financial leverage, space and opportunity for UNFPA to fund an infertility services program on the fourth floor. After the renovations UNFPA also provided an ultra-sound machine, and Ultrasound 3-D Company provided additional ultra-sound machines for the ward on a shared-profit basis.

f. Recommendations

1. The Ob-Gyn ward, as with almost all of the medical departments visited in the hospital need to give greater attention to providing high quality of care in terms of the counseling and information provided, the constellation of services and the continuity of services (i.e., referrals and linkages) as well.
2. Because the newly added 4th (top) floor is reported to be hot in the summer months and is short at least two ACs, efforts should be made to procure at least two more ACs, and possibly a few standing fans and more ceiling fans for the hot months. These are relatively minor investments which will improve the usability of the 4th floor area and will likely improve the productivity of the staff working there.
3. With the number of deliveries in the Ob-Gyn maternity ward nearly doubling in the past five years, that has resulted in continued crowding and noisiness in patients rooms, efforts should be made to secure more patient rooms and beds for Ob-Gyn maternity patients.

4. Internal Medicine Department

a. ATLANTIC Supported Activities

The new seven-story Internal Medicine Building opened in August of 2002. The Internal Medicine Building is made up of the **General and Digestive Surgery Department (7th floor); Neurosurgery and Orthopedic Surgery Department (6th floor); Urology and Thoracic Surgery Department (5th floor); Department of Hepto-gastroenterology, Nephrology, Endocrinology, and Miscellaneous Diseases (4th floor); Department of Pulmonology, Neurology,**

Rheumatology, Hematology, and Immunology (3rd floor); Department of Cardiology and Cardiovascular (2nd floor); Intensive Care Unit (ICU) (1st floor).

b. ATLANTIC Budget

Proposed Budget: \$ 1,750,000

Expended Budget: \$1,679,006

c. Achievements/Impact

The new Internal Medicine Building was opened for services in August 2002. The Atlantic consultant visited all seven floors/wards of the new Internal Medicine Building at Da Nang City Hospital on February 25th, with Ms Thuy EMWF staff member serving as interpreter and Mr. Huu of Da Nang City Hospital. The Atlantic consultant interviewed at least one staff member and one patient on each of the seven floors/wards, with a total of 8 staff interviews and 7 patient interviews being completed in the Internal Medicine Building.

The interviews with staff in the new Internal Medicine Building included interviews with two female Chief Nurses in two departments, a female regular nurse, a female doctor who was deputy director of a department, two male clinical doctors, a female health worker in the ICU and a female cleaner/custodian, with work experience in the hospital ranging from a couple of years to over thirty years. The seven patients interviewed ranged in age from 18 years old to 66 years old with a range of health conditions, including stomach surgery; spinal problem, knife wound, liver ulcer, respiratory problem, asthma combined with chronic obstructive pulmonary disease, and rheumatic fever. A summary of the staff and patient interviews are provided below.

At the **General and Digestive Surgery Department** on the 7th floor, the staff member interviewed (who had been working in the hospital for 17 years) said that the new building was much better than before, that they can serve the patients much better. They do about 500 selective surgery cases a year for both adults and children. The beds, treatment areas and equipment is now more complete and there is more space and better ventilation of air moving through the building. Although there are currently 55 beds on the 7th floor they need 90-100 beds, because there are still many cases of two patients in one bed. They requested more beds but it was not approved and they do not actually have enough space for all the extra beds they need. The patient on the 7th floor said the new facilities were very clean with better ventilation than before and that the doctors and nurses served the patients well. The patient's only complaint was that there were not enough beds and that the patients wanted one patient per bed. The cleaning staff member who was also interviewed on the 7th floor, said she received one week training about how to clean hospital buildings, that there were 24 people from here company hired to clean the hospital, working in eight hour shifts. She received 550,000 VND per month. The cleaning company Hoan My and hospital staff taught the cleaning teams how to deal with medical waste and cleaning chemicals, and they are given gloves and protective clothes for special cleaning activities.

At the **Neuro-surgery and Orthopedic Surgery Department** on the 6th floor the nurse that was interviewed said they do about 290 selective surgery cases a year, plus emergency surgery cases, and they have many more patients coming in for check-ups and exams, and referral cases from other places. Their official number of beds is 35 beds, the actual number of beds on the floor is 55 beds, but they say it would be better to have 80 beds to avoid doubling up of patients during busy times. The nurse said the staff likes the new facilities very much, that it is less confining and that more air comes through. The staff and patients feel more comfortable, cleaner, with wider hall areas and more space and furnishings than the other buildings. The patient interviewed came from Quang Ngai

province over 200 kilometers away. The patient said “I think its clean, I feel comfortable to be here, the doctors pay close attention to our needs, but I don’t like sharing a bed with another person.”

At the **Urology and Thoracic Surgery Department** on the 5th floor, the doctor interviewed reported they had 64 patients in the ward today and at least 1600 per year. He said he feels much better here than in the old building, that it is cleaner with wider rooms and better equipped and furnished than before. However, he also said the medical equipment is still not adequate and complete. He said feeling more comfortable makes his work better. The family member of the knifing patient was interviewed. It was only his first time to the hospital that day, and he said that the hygiene condition in the building was quite good and that the doctors and nurses provided well for the patients, and he had no recommendations for improving the facilities or services.

At the **Department of Hepto-gastroenterology, Nephrology, Endocrinology, and Miscellaneous Diseases** on the 4th floor the Vice Chief of the Department who was interviewed said that they have about 90-100 patients every day but only 55 beds, so space is still a problem. She felt the new facilities were generally quite good, but she said it would be better if they had an Air Conditioner for the serious patients room and another AC for the staff room. The male patients with a liver ulcer who was interviewed said the ward was “quite nice, beautiful, but I have to share a bed, it’s overcrowded”. It was mentioned by someone that there were sometimes three persons in a bed and that they took shifts sleeping.

At the **Department of Pulmonology, Neurology, Rheumatology, Hematology, and Immunology** on the 3rd floor, the chief nurse of the ward who was interviewed said they have about 25-30 patients per day and about 1,600 patients per year, and a total of 60 hospital beds, so crowding of patients was not as big of a problem in this ward. She said “everything is so clean and completely furnished here, I am comfortable working here and the patients feel the same.” As far as needs for the ward, she said the room for the nurses was not yet finished (its still empty); they need a room for doing minor operations; some small patient rooms only have one fan; they need to improve the system of patients waste/refuse removal --- it gets dirty quickly when the ward is crowded; they have some problems with patient toilets and faucets. One faucet was broken for eight days, it was reported to the water maintenance man two times already but still had not bee repaired. The patients from rural areas don’t know how to use the toilets and faucets and frequently break them by twisting the faucet or toilet handles or flushing food or other refuse down the sing or toilet. The patients and families need to be taught how to use the toilet facilities. The patient interviewed said the rooms were generally very clean with enough lighting and comfortable, but that some things in the patient bathroom was not good quality like faucets which broke easily.

At the **Department of Cardiology and Cardiovascular** on the 2nd floor the doctor interviewed said the cardiology ward had 40 beds but that there were currently 56 patients in the ward. The doctor thought the new facilities were very good, but they lacked essential equipment like an echocardiogram, EKG, monitor, Exercise Model, Electric Shock Model, and that they lacked an aspirator machine. Oxygen only comes directly into the serious patients room, so they must use separate oxygen tanks for patients needing oxygen in the other rooms. They would like more oxygen rooms instead of just one central oxygen room for the cardiology ward. The 66 year old cardiology patient from Quang Nam province who was interviewed was being treated for heart failure. He was sharing his bed with an 18 year old young man with rheumatic fever. He said he had no choice and that there were not enough toilets, because so many patients and their families use them. Some patient rooms in this ward did not have toilets because the rooms were originally designated for physical therapy. [Note: although there is no smoking allowed in the building (and there are signs up prohibiting smoking), some patients and family members do smoke in the wards except in the oxygen rooms.]

At the **Intensive Care Unit (ICU)** on the 1st floor, the health worker interviewed in the ICU unit said the new IM Building was nicer and better equipped than the old building, and she had no suggestions for further improving the facility. Most patients in the ICU ward were in bad condition and/or unconscious and none were interviewed by the ATLANTIC consultant.

Mr. Huu, the Hospital Administrative staff person visiting the IM building with us said the patients like the new facilities so much they stay a long time and want to come back. In interviews with some patients, they indicated that they had heard about the nice new facilities from other people from their commune/district/province who had visited Da Nang City Hospital and were happy with the improvements.

d. Challenges/Needs

The new internal medicine building provides a cleaner, lighter, better ventilated, and more spacious environment for better quality health care services, from both the perspective of the medical staff and the patients that were interviewed. Nevertheless, because the number of patients using these services is also increasing steadily, there is still a problem of overcrowding and not enough hospital beds reported by the surgery units on the 6th floor (have 55 beds but need 80) and 7th floor (have 55 beds but need 90-100), the Department of Hepto-Gastroenterology, Nephrology, Endocrinology, and Miscellaneous Diseases on the fourth floor and the Department of Cardiology and Cardiovascular Diseases on the second floor. The crowded wards there are some problems reported with the limited number of toilets and the toilets and facets having problems from patients and families not using them properly including breaking the faucets, and maintenance repairs being slow even when reported. Unfortunately, there is not enough space in the building to adequately accommodate the need for additional beds and toilets. At the same time on the third floor, the Department of Pulmonology, Neurology, Rheumatology, Hematology, and Immunology has twice as many beds (60) as the average number of inpatients staying in that Department (about 25-30 per day, so it is underutilized. This department would like to convert one room into a room for doing minor surgical procedures, so perhaps some of the unused patient room space could be used for that purpose, or the space could be given to patients from neighboring crowded wards on the 2nd or 4th floors (non-serious patients recovering and close to discharge time). Rural patients and their families also continue to need to be taught how to use the toilet facilities properly. The Urology and Thoracic Surgery Unit (5th) and the Department of Cardiology (2nd floor) report the need for more equipment, but this equipment should be provided under the expected grant from JICA.

Although signs are posted that smoking is prohibited in the hospital wards, hospital staff reported and the ATLANTIC consultant observed that some patients and/or their family members do smoke in the wards and hallways at times, though not in the rooms with oxygen. This is a potential health and safety (fire) hazard for the hospital and the patients staying there.

e. Leverage and Other Benefits

The Japanese donor organization JICA has agreed in principal and is finalizing its grant document to provide between three to five million dollars (USD) for providing medical equipment to all new and renovated hospital buildings (built or renovated with the Atlantic Philanthropies financial support).

f. Recommendations

1. EMWF and the Da Nang Hospital Administrative and Planning staff should work together to see how the needs of some departments and wards in the new Internal Medicine Building for more hospital beds (and toilet facilities) could be accommodated through more efficient space allocation when the new Emergency Care Building and the construction of the new Multi-purpose Building are completed.
2. Though both hospital staff and patients and their families are very happy with the more modern, convenient, more hygienic, better lighted, better ventilated and equipped hospital departments and wards in the internal medicine building, attention now should be focused on providing quality care in terms of counseling, diagnostics, treatment, referrals and follow-up. This will require ensuring that the departments and wards are well-equipped and that the staff receives the proper training on counseling, technical medical procedures, monitoring, management and supervision, and on other aspects of quality of care. Atlantic Philanthropies-supported EMWF projects should work with Da Nang City Hospital Administration and with other donors, and other public health organizations and institutions who provide the needed training and medical equipment, to help ensure the effective provision of quality medical care in the departments and wards of the Internal Medicine Building and in the other new or renovated medical departments at the hospital as well.
3. If additional Atlantic Philanthropies funds are made available, EMWF should consider assisting the Da Nang City Hospital in meeting the needs of the Internal Medicine Building's various department and ward requests for such items as better quality faucets in the toilet rooms; more ACs for the serious patient rooms; a small room for minor operations for the department on the 3rd floor of the building; direct oxygen lines for the non-serious cardiovascular patient rooms as well, in the cardiology ward on the 2nd floor.
4. If it has not been done so already, the Da Nang City Hospital's various department and wards should include all of their medical equipment needs in the grant request to the Japanese donor agency JICA.

[Note: The ATLANTIC consultant did not have time to explore the issue of HIV/AIDS prevention, voluntary counseling and testing, or where AIDS patients care and treatment and support takes place. However, as the HIV/AIDS epidemic continues to spread throughout Vietnam, hospitals and provincial, district, and communal health authorities will increasingly need to factor in this public health problem in their specific health service programs and training (including the surgery, Ob-Gyn, dermatology and sexually transmitted infections (STI), tuberculoses; and dental care).]

5. Morgue and Funeral Home Building

a. ATLANTIC Supported Activities

Construction of a new Morgue and Funeral Home for the Da Nang City Hospital with a second floor constructed to store hospital records. Construction was completed in January 2003.

b. ATLANTIC Budget

Proposed Budget: \$120,000 (May 2002)

Expended Budget: \$120,000 (including \$12,724 USD for project contingency funds)

c. Achievements/Impact

The new building construction and fittings were completed and turned over to the Da Nang City Hospital in March 2003. The work was done at the same time as the Waste Water Treatment Center renovations. The Morgue has cold storage capacity for up to 3 corpses, and two spaces were in use at the time of the ATLANTIC consultants visit. Prior to the new building, they did not have the equipment to keep the body cold. EMWF with ATLANTIC funding support provided stretchers, operation lights, operation table, a rubbish room, refrigeration equipment for cadavers, and a totally new building. They have a system for contacting the families cleaning bodies, embalming when necessary, returning the bodies to the families when possible for burial. There is no cremation facility at the hospital. Prior to the construction of the new building the Da Nang City Hospital was not used much as a morgue or funeral home, but since completion of the construction and vast improvement in the facilities services, its function and usefulness has increased greatly. For example, the number of deceased persons being sent to the Morgue and prepared for funerals more than doubled between 2000 and 2004, from 41 in the year 2000 before the construction of the new facility to 85 in 2003 the year after construction was completed.

On the day of the ATLANTIC consultants visit, there were two cadavers stored in two of the three refrigerated morgue storage areas, and two additional traffic fatalities were brought in for family identification and preparation for funeral services (i.e., preparing the bodies and coffins) during the time of the ATLANTIC consultant's interview with the Morgue's staff.

The Morgue staff member that was interviewed said the building was brighter, cleaner, and the air fresher, and they had a greater ability to manage the bodies. He said the old building was small and dark and the families did not want to bring bodies here because they thought it was a dark dirty place, but said that now families want to bring the bodies of deceased relatives here to be cleaned and prepared for burial. They charge \$100-\$130 dollars for cleaning and embalming the bodies which are usually buried within three to five days, and coffins cost between \$30-\$700. If the body is claimed and taken home and buried within one day of death then it is not always necessary to embalm the body at the Morgue.

d. Challenges/Needs

As of the time of the consultant's visit, it was reported that the second floor of the Morgue was not yet being used as a record storage area, as was originally planned. Hospital records were reportedly now being stored on the top floor of the renovated Pediatrics Department Building instead, which did not seem entirely logical, given the continued crowded inpatient room and beds in that Department.

e. Leverage and Other Benefits

The Morgue services are able to recover costs for much of the services they provide.

f. Recommendations

1. The second floor of the Morgue Building should be used for its intended purpose of storage of hospital records. This would free up more space in the crowded Pediatrics Building for patients, by moving the hospital records from the newly added fourth floor of the Pediatrics Building over to the second floor of the Morgue Building.

6. Medical Waste (non-solid) Treatment Facility

a. ATLANTIC Supported Activities

The construction has been completed (as of December 13, 2003). The Medical Waste Treatment Facility is in the trial run period now, before it is fully in commission. This is because bacteria processing takes about three months to get the system working well – and that process is now finishing up. EMWF put in two deep wells and a filtration system. The original building was renovated by EMWF and a second floor was added. They put in new tanks, agitators and aviators. Now both solid and liquid wastes are separated and processed. Thus, the liquids that are flushed at the hospital no longer go straight out to the storm drains and then the river, as was the case in the past. EMWF put a water supply system in for the whole hospital. Although the hospital is still connected to the city water supply, the entire hospital can run on the domestically produced wells, water supply and filtration system.

b. ATLANTIC Budget

Proposed Budget: \$450,000 (January 2003)

Expended Budget: \$450,000 (including \$21,500 for project contingency funds)

c. Achievements/Impact

None to report at this stage.

d. Challenges/Needs

Maintaining the proper functioning and quality of the medical (non-solid) waste removal system.

e. Leverage and Other Benefits

In 2002-2003 the French did some additional piping in some of the buildings, and a purified water plant was put in the Hospital by the French company Donzy. The water is bottled and is reportedly more pure than many of the popular bottled water brands.

According to Mark Conroy, the two deep wells put in by EMWF (60 meters deep) with submersible pumps and backflush filtration system which are easy to keep clean and saves the hospital about \$25,000 a year on the city water supply. From the money they save from the city water supply, they use \$25,000 to pay for private cleaning company to clean the whole hospital.

f. Recommendations

No specific recommendations.

7. Multi-purpose Building

a. ATLANTIC Supported Activities

A preliminary study was completed and sent to the Ministry of Health. The design for the building is finished. The Vietnamese Government approval process for the construction of new hospital buildings involves five national ministries (e.g., MOH, Ministry of Planning and Investment, Ministry of Finance) and also the Prime Minister's Office (because the project is more than \$500,000. EMWF is now commissioning a new Feasibility Study. Following this activity, a detailed design plan will be made and bids will be put out for the construction contractor(s). The next steps are (1) Finish the Feasibility Study by April-May 2004; (2) Do an 3 to 6-month detailed design for the building; (3) Do construction of the building over an 18-month period before the building is ready.

The multi-purpose building is planned to be a seven-story structure with approximately 350 hospital beds and 13,000 square meters of space (Troha Draft Report, April 2004). The current plans call for having an Administration Block in the building, a number of patient wards, Intensive Care Units (ICUs), operation theatres (they may move some of the operating theatres (OTs) from the existing surgery building over to the Multi-Purpose Building), the Pharmacy Department, Hemo-dialysis Department, Infection Control Department, Nutrition Department EENT (Eyes, Ears, Nose and Throat); central food cafeteria, and a laundry service area. Note: Mark Conroy reported the floor space being 10,000 square meters. (For more details on the departmental space allocation for the Multi-purpose Building see draft proposal of "Da Nang Multi-purpose Building", dated June 2003).

b. ATLANTIC Budget

Proposed Budget: \$2,250,000 (November 2003)

Expended Budget: Construction work has not begun yet.

c. Achievements/Impact

A proposal has been prepared that is 10 pages long (dated February 16, 2004) that was provided to the ATLANTIC consultant. According to Mark Conroy, EMWF Vietnam Director, EMWF is planning on starting construction on the **Da Nang City Hospital Multi-Purpose Building** by December 2004 and finish construction by March 2006. It will be a 6-story building about 10,000 square meters. Including 8 operating rooms, 7 support rooms, intensive care 7 rooms, food center 9 rooms, Pharmacy 10 rooms, Sterilization 10 rooms, cardiovascular 7 rooms, neuro-surgery 10 patients rooms and 8 support rooms, Administration 16 rooms, trauma center 10 patient rooms and 8 support rooms, digestive department 10 patient rooms and 8 support rooms, burn center 5 patient rooms and 5 support rooms, kidney dialysis 10 patient rooms and 8 support rooms.

d. Challenges/Needs

The initial Feasibility Study that was done was too big and expensive. It proposed 12 operating rooms which was considered by EMWF to be too many. So they are going back to continue the Feasibility Study process. EMWF has hired out a design consultant who is working with the hospital, but they still haven't worked out the detailed design or the size of the building yet.

Because this is a more complex building, it will take 3 to 6 months in doing the detailed design for the Multi-Purpose Building. Thus, the Multi-purpose Building is not expected to be ready for operation for about two more years. Some old hospital buildings in the front of the hospital will be demolished for the new construction, and some of these displace staff and patient may need to temporarily move into the new Emergency Care Building until the M-P Building is finished or other space can be identified in the hospital complex.

e. Leverage and Other Benefits

Once the Multi-purpose Building project has been approved by the government, EMWF and the contractors receive a tax free status on the purchase of imported goods, materials and equipment, on the value-added Tax (VAT), and on labor costs. Under the current JICA funding plan for equipping the New Emergency Care Building and existing hospital buildings, there is no provision for equipping the new Multi-purpose building, so financial support for providing appropriate medical equipment for the new M-P building is still needed.

f. Recommendations

1. The new Feasibility Study for the Da Nang City Hospital's planned new Multi-purpose Building needs to be completed as soon as possible during 2004, so that the detailed design and final approval process can be completed and the construction work begin (probably in early 2005).
2. The Da Nang City Hospital Administration and Planning offices should consider the request from the many still overcrowded patient wards and departments in the hospital, when deciding on the utilization of space in the new Multi-purpose Building, the new Emergency Building, Internal Medicine Building and renovated wards. Adequate space for patients and provision of quality care should be given the highest priority. Storage of hospital records, and dormitories for medical students, interns, and visiting family members may need to be consolidated or (in some cases) moved next to the hospital so that patients can receive the proper care they need. If funds are available, EMWF and Atlantic Philanthropies should consider supporting the hospital if it makes decisions to use the hospital space more efficiently to meet the needs of patients (in terms of additional renovations or rearranging of departments across buildings).

8. New Emergency Care and Diagnostic Center Building

a. ATLANTIC Supported Activities

The new Emergency Care and Diagnostic Center Building construction project has been approved for some time now and construction has been under-way for several months and is expected to be completed by late June or July. Opinions vary about when the building should be finished. Construction work was initiated in May 2002. The building is five stories high on one section of the structure and six stories high on the other section of the building with a heliport on top (Troha Draft Report, April 2004).

The building will include an Emergency Room(ER) with 15 beds on the first floor (including 5 ER beds, 2 OR beds, and 8 Post-Op room beds (Troha Draft Report, April 2004). There will also be X-ray rooms CT scan rooms and reception/waiting area for outpatients and family members. The second floor has two large corridors and a number of outpatient and staff rooms; the third floor has rehabilitation facilities and a number of offices; floors four and five is most laboratories and

diagnostics areas; and the sixth floor contains several examination rooms, staff rooms and a larger meeting room, and a stairway leading up to the helicopter landing pad (Troha Draft Report, April 2004).

b. ATLANTIC Budget

Proposed Budget: \$1,455,000 (September 2001)

c. Achievements/Impact

The project has been approved and construction is well underway. Mr. Pham Hung, architect for EMWF said the realistic expected completion date for the Emergency Care Building is not likely to be earlier than July 2004, and it may not be completed and ready for handover until the Fall 2004. It depends, in part, on how many discrepancies arise in the central construction design. Construction is well underway, and is expected to be completed by August 2004. The superstructure of the building is done, and at the time of the ATLANTIC consultants visit in late February/early March 2004, they were putting up the wall and the mechanical and electrical (M & E) work. The Da Nang City Hospital wanted to complete the building by April 2004, but Mr. Hung says that an April deadline was too rushed and that a few more months time is needed.

d. Challenges/Needs

There continues to be a need to determine what the most efficient use of the new Emergency Care building will be, to ensure that the investment in an additional multi-purpose building will not be somewhat redundant given the existence of the new Internal Medicine Building. However, with increasing numbers clients coming to all of the EMWF-renovated buildings and most of the departments and wards in the new Internal Medicine Building already being overcrowded with more patients, more space is clearly needed, and the new Multi-purpose Building and the new Emergency Care and Diagnostics Building will hopefully create much of the extra space that is needed. Careful hospital planning is needed to ensure that all hospital space is used efficiently and that patients needs are given some priority.

The fact that Da Nang City Health Department is now seriously considering building a new Regional Hospital across the river and possibly converting the current Da Nang City Hospital into a series of specialty hospital, makes it less certain that the original intent, purpose, and design of these new ATLANTIC-funded buildings will be maintained. If the purpose and function of these new buildings changes in the next few years, it will require re-designed and changing renovating fairly new buildings which is not very cost-effective.

The JICA team equipping the Emergency Care Diagnostic Center Building will need to give its specifications of what new equipment will need to go where. The Japanese JICA team has been relatively slow in working on this medical equipment grant. However, the Emergency Care Building may be used somewhat differently temporarily for the displace people who will eventually move into the new Multi-Purpose Building.

e. Leverage and Other Benefits

During the ATLANTIC consultants visit a large team from the Japanese development and funding organization JICA were visiting the Da Nang City Hospital to finalize a project to support the equipping of the new Emergency Care Building and all of the renovated medical buildings (that

ATLANTIC funded renovations on) with new medical equipment and technology appropriate to the specialties and services being provided or to be provided in the future. The amount of the JICA funding of medical equipment that they have agreed in principal to provide to the Da Nang City Hospital is in the range of \$3 million to \$5 million dollars (US), including a reported \$1.7 million dollars for equipping the new Emergency Care Building. The initial infrastructure support provide by ATLANTIC, including the renovations and construction of new medical buildings created the necessary leverage and confidence for the JICA organization to pursue the needed complementary support for equipping these buildings with necessary and appropriate medical technology and equipment. In the case where JICA does not fund the equipping the new Emergency Care Building, the back-up plan is for the hospital to obtain an interest free loan or low interest loan from the Vietnamese National Government account.

f. Recommendations

1. The Da Nang City Hospital administration and planning offices should meet with various medical departments again, and with EMWF and representatives from Atlantic Philanthropies to clarify the needs for space for patients and for the administrative and medical staff, and how the new buildings funded by Atlantic Philanthropies can be used effectively to meet those needs and to provide quality care.

9. EMWF Role in the ATLANTIC Project

a. ATLANTIC Supported Activities

The many ATLANTIC-supported activities of EMWF are reported throughout this report and in Table 1 (all projects) and in End Note Number 6 (for Quang Tri and Quang Binh province). EMWF continues to focus on humanitarian projects and, and with Atlantic support, over the next three years will complete three new hospital construction projects, i.e., The CVC in Hue, and the new Multipurpose Buildings at Da Nang City Hospital and the Quang Tri General Hospital.

b. ATLANTIC Budget

During the 1999-April 2004 period EMWF has implemented many ATLANTIC-supported hospital construction and renovations project and humanitarian projects that add up to \$16,709,250 in commitments of Atlantic Philanthropies funds (including the new Pediatrics Building at Hue Central Hospital; the planned new Hue Cardiovascular Center; the new Internal Medicine Building of Da Nang City Hospital; the Emergency Care and Diagnostics Center Building at Da Nang City Hospital, the planned new Multi-purpose Building for Da Nang City Hospital, the Da Nang City Hospital Morgue Building, Medical Waste Building, Ob-Gyn Department renovation, and the Surgery/ICU Building renovations; the Quang Tri Hospital renovations; and the many EMWF humanitarian programs supported by Atlantic Philanthropies over the past five years).

c. Achievements/Impact

The achievements of the EMWF projects supported by ATLANTIC are documented throughout this report in Table 1 (all projects) and in End Note Number 6 (for Quang Tri and Quang Binh province). Well over one quarter million people have directly benefited from the ATLANTIC-supported EMWF projects

d. Challenges/Needs

Atlantic Philanthropies is increasing its program focus on health projects, and expanding its scope well-behind “bricks and mortar” construction of health facilities. EMWF may need to strengthen its staff capability to include more public health expertise, if it wants to contribute to ATLANTIC support programs for local capacity-building of health professionals, injury prevention, blindness and sight restoration, and prevention programs for communicable diseases. EMWF may need to explore other funding sources and diversify its financial support base to reduce its vulnerability or dependence on ATLANTIC funding, in cases the Atlantic Philanthropies moves away from health and humanitarian infrastructure construction projects in the future.

e. Leverage and Other Benefits

The Atlantic Philanthropies funds for EMWF hospital building construction and renovation activities and for EMWF humanitarian programs such as HHP and FERF have created a significant amount of leverage in mobilizing additional funds for the various projects. For some projects the amount of funds leveraged was nearly as much as the original amount of funds provided by Atlantic Philanthropies. For example, the expected JICA funds of three to five million dollars USD for supplying medical equipment to all the renovated or newly constructed Da Nang City Hospital buildings that were funded by ATLANTIC. Operation Walk (\$34,000 of Atlantic to Dr. Paul Wade’s Project) was able to leverage more than 50,000 dollars worth of surgical equipment and thousands of dollars of free physician and physical therapists time devoted to provided medical technical assistance to Vietnamese counterparts as part of the Operation Walk. The Vietnamese Committee for Population, Family and Children, the International NGO Clearpath International were able to provide equivalent amount of funds (roughly matching the EMWF/ATLANTIC contributions) for some Healthy Heart Program cases and/or Family Emergency Assistance Fund cases, and other international NGOs and donors such as UNFPA provided additional funds to further enhance activities and facilities that were built or renovated by EMWF with Atlantic Philanthropies funding..

Note: Other Atlantic Philanthropies reported projects reviewed in this report (e.g., Kids First Village Project; and the Heart Institute) were also able to leverage additional funds and support for activities first funded by Atlantic Philanthropies or to fund training and equipment needed for those project activities.

f. Recommendations

1. Since EMWF/Da Nang Office may be getting stretched too far geographically on ATLANTIC-supported projects, EMWF they should consider targeting Atlantic-supported interventions and health infrastructure construction projects in selected focal districts and communes (having the greatest need) in Da Nang City and Quang Nam province for the next three-five years. This will ensure maximum public health impact in the focal communities and be a more efficient use of available funds. The ATLANTIC-supported projects should be more linked to each other in the focal areas and be more comprehensive. This will ensure better coordination and supervision of project activities and lighten the strain on human resources (staff) at EMWF. However, EMWF’s HHP outreach program should continue to cover a number of provinces to identify young heart patients in need of the vital support for treatment provided by EMWF and ATLANTIC.

EMWF/Quang Tri Office should also remain focussed on selected focus districts and communes in Quang Tri and Quang Binh provinces for the same reasons.

2. Since the only public health/medical professional on the EMWF staff in Vietnam (Dr. Truong Dien Long) has left EMWF to pursue a Masters degree in HCMC, EMWF should seriously consider recruiting another medical/public health specialist for its staff (either international or Vietnamese), especially if it intends to continue to work on ATLANTIC-funded health projects. EMWF needs to consider its potential role as ATLANTIC focuses more of its financial support on health projects in Vietnam, and not only health infrastructure construction projects, but health education and training, capacity-building, and local prevention of communicable diseases and injuries, blindness prevention and sight restoration, and rehabilitation.

3. Given the Atlantic Philanthropies increasing focus in Vietnam on health, and on health promotion and communicable disease and injury prevention, and on capacity-building of health personnel, as well as its traditional support of building new health infrastructure (bricks and mortar), EMWF needs to take a strategic look at its strengths and weaknesses in terms of its current human and financial resources, and establish its program priorities for the future.

4. EMWF may wish to consider partnering with an International NGO and/or a Vietnamese public health organization, if EMWF is going to continue and/or expand its involvement in more comprehensive health projects at the local level.

10. EMWF Healthy Heart Program

a. ATLANTIC Supported Activities

Since 1993 the Healthy Heart Program (HHP) has been a growing health and humanitarian activity of EMWF in Vietnam, working in at least 10 provinces to identify children in need of interventional cardiology procedures and/or heart surgery and provided needed financial support to have the procedures performed. The 10 provinces that EMWF has worked for the Healthy Heart Program, with financial support from ATLANTIC and other donors (including individuals and organizations) are Da Nang, Hue, Quang Tri, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Quang Binh, Nghe An, and Thai Nguyen. EMWF works with social workers in each province to identify and screen eligible patients, and to assess their social and economic situation and level of need for financial support. In 1999 ATLANTIC funds were first used to support the HHP activities of EMWF. .

b. ATLANTIC Budget

EMWF uses unrestricted general grant ATLANTIC funds to support the Healthy Heart Program, with the amount of support for each patient based on need. Potential candidates for the HHP are given medical check-ups and a social worker does a home visit assessment to determine the families social and economic circumstances and level of need. EMWF/ATLANTIC support covered all or part of the examination fees, transportation costs, medications, food, and the surgical procedure for the patients identified and selected. The Atlantic funds have been supporting the HHP since 1997/1998. Approximately \$130,000 in Atlantic funds were used for the HHP patients from 1998-2003. Table 1 shows that for the years 2000,2002, and 2003, EMWF used \$35,333 USD of ATLANTIC funds to pay for 438 surgeries.

[Note: It was reported informally that ATLANTIC provides some \$300,000 a year for overhead costs of EMWF in Da Nang for the three EMWF offices in Vietnam (i.e., Da Nang Office, Quang

Tri Office, and Thai Nguyen Office), and the Oakland EMWF Headquarters office also gets some overhead funds from ATLANTIC.]

c. Achievements/Impact

During the period 1999-2003, ATLANTIC financial support has contributed to services provided to 806 heart patients, including 438 heart surgery operations primarily for children with congenital heart defects under the EMWF Healthy Heart Program. Between 1999 and 2003 the number of ATLANTIC-supported HHP patients receiving support for heart services more than doubled from 95 patients in 1999 climbing up to 223 patients by the year 2003, and the number of HHP surgeries performed with ATLANTIC financial support more than tripled from 40 surgeries in 1999 climbing up to 189 surgeries in 2003 (Note: these data include HHP activities of both the Da Nang and Quang Tri EMWF Offices combined, and covering an area of 10 provinces). Sometimes older patients are included in the screening and support activities. Some patients were sent to HCMC for treatment at the Heart Institute which was more expensive than sending them to the Hue Central Hospital. Dr. Phu chief surgeon for Hue Central Hospital was sent to the Heart Institute in HCMC and also to France for Heart Surgery training, and he and his medical team at Hue Central Hospital are now doing open heart surgeries. Increasingly, as Hue Central Hospital capacity has been improving in recent years, more and more of the HHP patients are being referred to Hue Central Hospital. When the new cardiovascular center at Hue Hospital (funded by ATLANTIC through EMWF), Hue Central Hospital will also have a much greater capacity to do closed-heart interventional cardiology procedures such as dilatations, angioplasty and stent insertions.

The ATLANTIC consultant interviewed three Healthy Heart Program patients and their families in Da Nang and two more in Quang Tri; discussed the Healthy Heart Program with EMWF staff working on the project; reviewed the patient profiles, and received copies of the HHP profiles for those who were interviewed.

HHP Case A: The first HHP interview case was an eight-year old girl named Hoang and her mother. She first came in for examination in July of 2003, after complaining to her mother of tiredness and other symptoms. The assessment of socio-economic situation was completed on October 30, 2003. The first operation (and the only operation planned at this point) was performed on December 1, 2003. She has gained over 2 kilos since the operation and her health condition is now very good. The mother did not think it was a long wait for an operation. The hospital asked her to bring the child in to the hospital in November (which they did and she was admitted to the hospital and checked and prepared for the operation. The child and mother have returned for follow-up visits and re-examination on January 9, 2004 and February 9, 2004. Hoang said “Before I was tired. I feel more healthy now. I feel happier with my friends and school.” The mother said “She was very tired. She could not walk up the stairs, but after the operation, she can now play with her friends, and her studies have improved and she feels more healthy.” The mother expressed her gratitude and appreciation for the benefits of the HHP, especially for her own child who got help for her heart problem. “Without the help she couldn’t do anything.” Profiles and photos were reviewed with the family and the EMWF Social Worker in the Da Nang City office of EMWF.

HHP Case B: The second case interviewed with her mother was a 6 year old girl named Vi with her mother. The girl was the first child, and she was a younger who was four months old at the time of the interview. The initial visit to EMWF Da Nang Office was in 1999, and two years later they were provided money to travel to HCMC after the socio-economic assessment was completed in June of 2001 by EMWF social worker Ms. Huong who checked on the family situation. The operation was done on February 4, 2002 at the Heart Institute in HCMC. The mother went down to HCMC with her daughter for three months in HCMC. They went down to HCMC 8 times by train for the whole

process (4 trips to HCMC before the operation, 1 trip for the operation, and 3 trips post operation trips to Heart Institute in HCMC. Each trip was about five days counting travel time (except for the operation trip which was three weeks long (for pre-operation preparation, operation, and post-operation period --- admitted on February 26 ,2002 and release on March 18, 2002. Although only one operation was planned, the doctor diagnosed just the day before the ATLANTIC interview that another operation may be necessary because he suspects there is still a small hole in the heart. The doctor said to wait for three months and he will check again. The mother said the child's condition "before the initial EMWF visit, she was very weak and tired, but now she is very healthy after the operation. She can play and study like her classmates and can play with her friends after school, something she couldn't do before because she was so tired and weak." The mother also said "the doctors are good, everything is good, I am satisfied with everything, and we appreciate the kindness and assistance of the EMWF and doctors working to save the children's lives".

HHP Case C: The third HHP client/family the ATLANTIC consultant interviewed was an 11 year old boy and his father (age 40) from Tien Phuoc District of Quang Nam province, 100 kilometers away. The boy is the second of three children in the family. The family is very poor, with the mother working on a coffee plantation in a mountainous area of another province near Buon Me Thuot and the father earns money sometimes by collecting apricots in the forest and selling them, but the income is very small . They started asking for help in 2000 and the boy got his first operation performed in HCMC at the heart Institute in December 2002. It is a complicated case and the boy needs a second operations. The first operation costs \$750. For the first operation EMW provided food, medicine and travel costs, but did not provide any money for the operation back then. The second operation will cost about \$2,000. The boy was fortunate to have the People's Committee of the province to pay for all of the first operation from the provincial funds for the Association of Poor Patients, but the costs for the second operation are too high for the People's Committee's Association of the Poor fund which has been fairly depleted in the last couple of years with so many poor cases now, they can now only offer each case about one to two million Vietnam Dong . The father reported that the boy had to make trips to the HCMC Heart Institute at least 15 times in the past four years for screening, check-ups, the operation itself (a six week period), follow-up visits, and preparatory visits for the second operation (an open-heart Fallot-Blalock procedure which they would like to have done in the summer vacation period of 2004. The EMWF social worker Ms. Huong confirmed that EMWF supported multiple visits of the boy to HCMC Heart Institute, with most visits including travel taking 4-5 days. The second operation is clearly needed and his situation has been getting worse recently. The ATLANTIC consultant observed the boy was thin and weak, and his fingertips were purple from circulatory problems. The father reported that his son has a bad appetite, is weak and still faints, sometimes on the train when they are traveling to HCMC. The boy still goes to school, but the father has to carry him on his shoulders and although he is 11 years old he is only in the first grade. The family had to pay for only one trip completely by themselves, because the trip was so soon after the previous EMWF supported trip; usually it should be 2-3 months between trips. The average EMWF cost of examination/check-up/follow-up trips to HCMC was reported to be 650,000 VND (not counting the operation trip which is longer and more costly). The boys mother sends money to help pay for the trips to HCMC and the father's costs are not covered at all by the EMWF/ATLANTIC supported HHP. EMWF also pays for some of the examination fees such as the blood tests, ultra-sound, and heart-beat checks. One reason given for the delay in the boys second operation is that he needs to be more healthy and have better nutrition before he can have the second operation. In this particular case, it was reported by the EMWF social worker that Mark Conroy had decided to fund 50% for the second surgery costs for this client.

The ATLANTIC consultant did not have enough time to ascertain the usefulness and review the results of each trip that the boy and his father had made to the Heart Institute in HCMC. The records

provided by the EMWF social worker to the ATLANTIC consultant appeared to be incomplete, but I was told that the Heart Institute in HCMC has a big file on this boys case.

The father said that the whole family is grateful and thankful for the EMWF support and that he could only say “Thank You”.

HHP Case D: (Quang Tri) (see section on Humanitarian Programs for Quang Tri Province)

HHP Case E: (Quang Tri) (see section on Humanitarian Programs for Quang Tri Province)

d. Challenges/Needs

It was also reported that the Heart Institute has too many waiting cases, although there is good cooperation between EMWF and the Heart Institute, and there is a social worker at the Heart Institute that is designated to look after the HHP patients that are referred down to the Heart Institute. The EMWF social worker or other EMWF staff go to HCMC Heart Institute every year or so to check on the cooperation with the Heart Institute on the HHP clients. However, the EMWF social worker, Ms. Huong reported only having gone down to the Heart Institute only once. Ms. Mai is well-regarded by EMWF staff and serves as the liaison social worker at the Heart Institute who comes up to the EMWF Office in Da Nang periodically (every 2-3 years), as well. Ms. Mai investigates 20-30 cases a year and helps to decide on funding. However, the process and procedures can take a long time, sometimes two-three years to get through the whole process at the Heart Institute. Sometimes EMWF will fully fund a case, depending on the situation and need, but with so many cases and limited funds it can be hard to decide. The EMWF social worker will ask Mark Conroy EMWF director for approval on long, slow, and serious cases.

One HHP patient’s mother said that when her daughter was admitted to the hospital for the operation, the mother and child were separated for three days, and whenever she asked for information about her daughter, the doctors did not give clear information about her child’s status, and they seemed to be hiding something (in her opinion), and it was very difficult to ask the doctors questions, they seemed to not want the mother to know. The mother does not blame the hospital for separating them during the operation time, but only for the lack of clear information.

e. Leverage and Other Benefits

Because there are so many cases, EMWF normally covers the travel costs only and for the patient and some check-up exams, and does not cover the travel costs for the family members. EMWF works with the social affairs department of the People’s Committee and also with the Heart Institute in HCMC (and with Hue Central Hospital) to figure out support for clients in need of heart operations. It was reported that for the EMWF HHP activities in 2003, the EMWF HHP budget was about \$46,032 for 223 patient services including 155 surgeries, and including travel and surgery costs. The Vietnamese provincial Committee on Population Family and Children (CPFC) sometimes contributes part of the funds needed, along with the EMWF/ATLANTIC contributions and the families own contributions. ATLANTIC money is allocated for HHP patients in Quang Tri and Quang Binh provinces to the north of Da Nang (about \$10,000 a year), and about \$5,000 dollars US each for Quang Ngai, Phu Yen, and Binh Dinh provinces to the south of Da Nang and Quang Nam province. Funds from individuals and other sources contributing to EMWF are also sometimes used to support patients participating in the Healthy Heart Program of EMWF.

f. Recommendations

The Healthy Heart Program with ATLANTIC support has contributed to saving many lives and substantially improving the health status and well-being of many children in Central Vietnam with congenital heart defects. The program is careful and efficient in its use of funds for those in most need of support (having learned some lessons from some families misrepresenting their financial need status in the early years of the program).

1. It is recommended that ATLANTIC support for the HHP activities is continued, with continued careful assessments of each family's financial needs and referrals to appropriate health institutions for cardiovascular care (e.g., Heart Institute in HCMC and the Hue Central Hospital).
2. Future HHP activities, including the identification, screening and referrals should be closely linked to the service program of the new CVC that is beginning the construction stage at the Hue Central Hospital. Once operational the CVC should assign project staff and social workers at Hue Central Hospital CVC Center to work closely with EMWF's Da Nang and Quang Tri Offices on HHP patient case management, to avoid delays in patients receiving needed heart care services.
3. If and when a new multi-purpose building is constructed with ATLANTIC money at the Quang Tri hospital, with a new cardiology unit included, some of the medical assessments and doppler tests could be done right there in Dong Ha to determine if surgery is needed. This assumes that there will be an adequately trained cardiology doctor at the Quang Tri Hospital and that the necessary equipment will be there. This will save the HHP patients/family and EMWF time and money.
4. Once the new CVC building is completed and operational at the Hue Central Hospital, the EMWF Quang Tri office should take advantage of the improved facilities there to refer HHP patients there for surgery or other interventional cardiology procedures, rather than to HCMC or Hanoi, thus saving ATLANTIC project funds.

Capacity-Building/Training for Health Staff:

a. ATLANTIC Supported Capacity-building Activities

Atlantic Philanthropies in Vietnam is moving from primarily "bricks and mortars" health facility construction projects to increased Atlantic support for more comprehensive community level health care models, stating that the recent project support to DN City Health Department for capacity-building training for health providers at commune and district levels is a positive step in the right direction towards a comprehensive public health system of community health care, with efforts to improve management and service delivery and creating referrals and linkages between the different levels of health care and between prevention and care activities.

There is a continued need for improved province-wide/city-wide health planning and hospital management and greater decentralization of decision-making (and wider involvement of lower level health managers in the decision-making process). It should be noted that Atlantic's also recently began supporting the Hanoi School of Public Health to develop hospital management courses and a Master's Degree Program in Hospital Management. Atlantic's decision to support the establishment of a CVC project office at Hue Central Hospital, and for hiring an international management consultant to assist in setting up an effective management system for the new CVC should help to ensure that Atlantic's investment in improving cardiovascular services at Hue Central Hospital will be successful and sustainable.

Physician Education Project: This was a physician training project carried out in Da Nang City, with foreign physicians coming from the U.S. and Australia to train medical professionals in a series of topics and modules, mostly given in English with Vietnamese translations.

Improving the Capacity of the Health Care Delivery System at the Commune Level:

A \$100,000 pilot project started in January 2004 administered through EMWF to the Da Nang City Health Department for a new training/capacity-building initiative for commune/ward and district health staff. The title of the project is “Improving the Capacity of the Health Care Delivery System at the Commune Level”. Dr. Bui Huu Tri, MD, MPH has been hired as the chief consultant for this project. The project has two main activities (1) Upgrading the medical training center (including supplies); (2) Providing continuing training for commune/ward and district level doctors, nurses, midwives and village health volunteers.

The ATLANTIC consultant interviewed Dr. Trinh Luong Tran, Head of the Da Nang City Health Department. The Da Nang City Health Department oversees all health services in Da Nang City (population 728,000 in an area of 1,256 square kilometers, divided administratively into 6 districts and 47 communes). The Health Department has seven divisions: (1) Professional Management Division; (2) International Cooperation; (3) Pharmaceutical Division; (4) Personnel Division; (5) Financial Division; (6) General Planning Division; and (7) Inspection Division. The ATLANTIC consultant also interviewed Dr. Tri, who is in charge of the International Cooperation Division of the Da Nang City Health Department, and who is overseeing the new ATLANTIC-supported Da Nang capacity-building training project.

Dr. Tran, head of Da Nang City Health Department, said there have been three successful things from the ATLANTIC-supported projects:

(1) Improvements in Health infrastructure -- renovations have made very clean, open expanded areas for health services, and the work has helped to solve the problem of patient overload and insufficient number of hospital beds. “Therefore, we provide better health care services with an expanded infrastructure.” And “because it is easier to keep areas clean for sanitation, the quality of medical care is also improving.”

(2) EMWF and ATLANTIC are also supplying some equipment , such as replacing all the old patient beds and cabinets with new stainless steel ones that are both durable and better for sanitation.

(3) EMWF and ATLANTIC are helping to improve the quality of health services by building capacity of the health staff. Dr. Tran stated that the ATLANTIC-supported training program is very necessary and he hopes it will continue, and that it should be relevant to the needs of health workers at their different levels.

b. ATLANTIC Budget:

Capacity-Building/Training for Health Staff: Physician Education Project: \$ 52,167 USD.

Improving the Capacity of the Health Care Delivery System at the Commune Level: \$100,000 (January 2004)

c. Achievements/Impact

Capacity-Building/Training for Health Staff:

Physician Education Project:

At least four training sessions for Da Nang City Hospital doctors and nurses were conducted between November 2000 and June 2001. Special topics with ready made videos included Lower Respiratory Tract Infections; Neonatal Resuscitation; Fever in Children; Acute Pneumatic Fever; Micro-biology: An Overview; Asthma in Infancy Childhood and Adolescence and Pediatric Trauma. Training sessions were four days long each (e.g., Nov 13-17, 2000; March 5-9, 2001; May 2-5, 2001; June 4-8, 2001). All the training sessions were video taped in their entirety. The trainings were conducted in English with PowerPoint and slide shows also shown in English, with Vietnamese translation being done throughout. The training sessions were done over short periods of 4 days). The curriculums were approved in Hanoi by the Ministry of Health. A Vietnamese translation/adaptation of the book "Essentials of Obstetrics and Gynecology" 3rd Edition Neville F. Hacker and J. George Moore was drafted but final editing and publishing was not completed when the project was discontinued. Dr. Linh, Vice-Chair of the Ob/Gyn Department of Da Nang City Hospital was in charge of the Vietnamese translation, with others being hired to translate specific chapters. In addition a small green 51 page booklet was also produced and published in Vietnamese in Da Nang in 2003. The booklet was entitled "A Clinical Guide to Common Medical Emergencies". Some of the later training sessions that were planned were cancelled due to a reluctance of the U.S. based trainers to travel to Vietnam during the months following the 9/11 2001 incidents in the U.S. Melanie Walker the first person in charge of the project wanted to organize more trainings but could not convince people to travel to Vietnam at that time. Dr. Hoang Khanh is in charge of Health Care Management in the Management Division of the Da Nang Health Department and he was designated the Physician Education Program project manager after Alex Lemon left the project. Alex Lemon was a former medical student with very little knowledge of Vietnamese. Dr. Khanh was also involved in the translations.

Improving the Capacity of the Health Care Delivery System at the Commune Level:

In January 2004, a new capacity-building and training project was initiated to train all Da Nang ward/commune and district health staff in a range of public health service programs and management areas. As part of the project, the Da Nang City Health Department is renovating and expanding its training center for health staff with support from EMWF and ATLANTIC. The project is only one year duration. The training course curricula is being developed. Eleven course sessions are planned that will train 100% of commune/ward level staff. Estimated class size will be between 20-30 for each session. Two doctors course sessions, two nurse course sessions, two midwife course sessions and 5 sessions for village health volunteers are planned with each course session lasting 7-10 days each. Topics to be covered include: (1) First Aid; (2) Management skills (how to make a plan and how to monitor and evaluate activities); (3) Epidemiology; (4) Computer skills; (5) Updated medical knowledge skills; and (6) Health Education skills. Course teachers are being selected from different departments of the Da Nang City Health Department. All or most of the teachers have MPH degrees from international universities or the Hanoi School of Public Health. Dr. Hoang Khanh (MD, MPH University of Washington); Dr. Ngo van Quang (MD, MPH University of Washington); Dr. Ton That Thanh (MD, MPH Hanoi School of Public Health) have been selected as trainers already. Dr. Bui Huu Tri also has an MPH from Mahidol University in Thailand.

Renovation work at the Da Nang Health Training Center is expected to be finished by the end of April 2004. The ATLANTIC consultant visited the training center site with Dr. Tran, Head of the Da Nang City Health Department and with Mark Conroy, EMWF Country Director, and observed

some of the renovation work that had already been completed or that was underway. The construction included the expansion of the width of the building.

Dr. Tran mentioned that because the Da Nang City Hospital is now a very good facility with good medical staff capacity, most patients don't want to be referred to other hospitals, but prefer to stay there. Dr. Tran concluded that the ATLANTIC-supported medical facility improvement project in Da Nang City was very successful. Dr. Tran also likes the new capacity building training project that is just getting underway because it strengthens health centers at the grass roots level.

d. Challenges/Needs

Capacity-Building/Training for Health Staff: The Physician Education Project was determined to be ineffective in its format, curriculum and implementation and was discontinued. The relatively short training sessions conducted in English by health professional based in developed countries such as the United States were relevant to providing health services and treatments in a health service setting in the United States. Thus, this was not an entirely effective or appropriate training format for the Da Nang City hospital staff, most who do not speak good English and who work in very different health service setting than those of the trainers. The perception of some of the local observers of this activity was that it was "a waste" of time and money and that it wasn't working effectively as a training program.

The success of new training project for commune health workers will depend on the organization and content of the curriculum and the quality and appropriateness of the trainers selected for this capacity-building effort. An assessment of the specific training needs of the commune/ward level and district level health staff is needed, as well as clearly defined objectives of the training/capacity-building activities and an appropriate and complete training curriculum.

Management is a problem with many of the government health facilities in terms of procuring and maintaining equipment, utilization of space, client flow and ensuring quality of care, excessive bureaucratic requirements for approvals and reporting, and centralized top-down planning and decision-making. The hospital management, senior administrative staff, and health professionals should get training in how to improve management and to improve the efficiency and quality of health services.

Dr. Tran , Director of the Da Nang City Health Department, mentioned that the Capacity-Building project needs to get feedback from the commune/ward level health staff to find out what they really need in terms of training. The previous Physician Education Project (PEP) was a specialty training for district level and City level doctors who were included in the same classes and this was a problem. There is also a continued need to ensure the appropriate medical equipment is available at all levels and a need to improve the infrastructure at the commune level, with selected commune areas serving as models. Dr. Tran would like ATLANTIC support for public health equipment, pointing out that there are only 47 communes/wards in Da Nang.

e. Leverage

Capacity-Building/Training for Health Staff: Local authorities provide training facilities and staff to assist in the capacity building efforts, and will use local health budget to support some health staff to participate in in-country technical training.

f. Recommendations

Other EMWF Humanitarian/Health Programs (FERF; Water Projects; Capacity Building; DORC; Eye Hospital; District Hospital; commune clinics and schools; Operation Walk)

a. ATLANTIC Supported Activities:

The Atlantic Philanthropies has provided financial support through EMWF offices in Da Nang and Quang Tri and some direct support for a number of other health-related humanitarian activities over the past five years. These activities included contributions to the Family Emergency Relief Fund (FERF), capacity-building and training for physicians and health staff of Da Nang City Health Departments and districts and ward health centers, new constructions or renovations of commune/ward health clinics and schools, a district hospital wing in Quang Nam, Operation Walk which included support for Australian and American physicians and physical therapy/rehabilitation specialists to work health staff and patients with movement disabilities at Da Nang Hospital, the Department of Orthopedics and Rehabilitation Center (DORC), and other health facilities in central Vietnam providing surgical interventions for patients with movement disabilities. ATLANTIC funds were also used to help finance improvements in village clean water storage, supply, and irrigation systems, construction of compassion homes and relocation houses, construction of bridges and electrification systems, and one road, support the Tien Phuoc Disabled Children Center and the Tien Phuoc Orphanage, and to income generation projects (including micro loans, pig breeding, and financial assistance). Plans are also underway for ATLANTIC support the Da Nang Eye Center. ATLANTIC funds were also used to support selected other humanitarian projects such as building or renovating commune schools and latrines. Prior to ATLANTIC support, Atlantic monies were also used from the Atlantic Foundation and Atlantic Pacific funds dating back to 1998. Beginning in 2000 ATLANTIC began channeling funds to support EMWF health and humanitarian activities through the new project administration mechanism called REACH Vietnam. As of March 2004 there were two new proposals from EMWF to ATLANTIC that were up for approval: (1) The Da Nang Eye Hospital Project and (2) Support for a new Multi-Purpose building for the Quang Tri Hospital. Melanie Walker and her successor Alex Lemon administered with their Vietnamese project assistants, a Physician Education Project at Da Nang City Hospital (medical training) for approximately one year in 2000/2001, but the training approach and its implementation was determined to be not very effective and the project was discontinued.

FERF: FERF is essentially a financial safety net available to very poor families who live in the communities served by EMWF. Under the FERF program, EMWF provides financial assistance (on a need basis) to help very poor patients to receive surgical operations, emergency medical care, rehabilitation for injuries and disabilities and related needs (e.g., providing indoor western style toilets for double amputees who are unable to squat in eastern style squat toilets). The Atlantic Philanthropies funds have been used to support the Family Emergency Relief Fund (FERF) as some are some funds that are donated by other organizations and individuals to EMWF. The fund provides assistance to poor families with special health and other needs who are referred to EMWF from the hospitals and rehabilitation center.

Clean water systems projects: EMWF has used ATLANTIC funds and other funding sources to put in water storage tanks, filters, well and water supply systems in selected communes in EMWF project provinces (e.g., Quang Nam and Quang Tri). This improves the health and hygiene of the many poor rural families that benefit from the water systems.

Commune Clinic/District Hospital renovations: EMWF has used ATLANTIC funds and other funding sources to renovate selected existing commune health clinics in Da Nang City and Quang Nam province and to renovate the Duy Xuyen hospital.

Operation Walk: This was a two-year project funded by ATLANTIC, with Dr. Paul Wade, and American Podiatrist living in Australia serving as the Project Coordinator. The project provided support for podiatric surgeons and rehabilitation therapists to teach and provide hands-on assistance to Vietnamese Surgeons and physical therapists at the Da Nang Orthopedic and Rehabilitation Center (DORC), Da Nang City Hospital and selected other hospitals in the central region. The main emphasis of the work is assisting local doctors and surgeons with new techniques for the treatment of deformities of the lower extremity and to assist with needed surgical equipment and supplies. The focus of the support for surgical activities was on children and young adults with disorders of the lower limb, foot and ankle, that may have been caused by trauma, birth defects or childhood diseases causing a deformity that has limited the individual's ability to walk or stand unaided, and making them dependent on others for assistance in normal daily living activities.

Compassion Homes and Relocation Houses: Atlantic funds were used to support some of the construction costs of some compassion homes for poor and disadvantaged families and for relocation houses for displaced persons.

Da Nang Eye Hospital: A 14-page draft proposal has been prepared (dated December 2003) and is awaiting approval from ATLANTIC before proceeding to the detailed plans and submission to the Ministry of Health and other approving authorities in Hanoi .

b. ATLANTIC Budget:

Over the past five years (1999-2003) Atlantic Philanthropies has supported projects in the amount of \$3,686,250 USD (excluding the budgets for the Hue Central Hospital new Pediatrics Building; the Da Nang City Hospital's new Internal Medicine Building and the Emergency Care Building). The following is a list of the ATLANTIC financial support and contributions to the various humanitarian and public health activities mentioned above: (For more detailed annual information on EMWF humanitarian projects funded by the Atlantic Philanthropies during the 1999-February 2004 period, please refer to Table 1, which shows the number of projects in each categories, the budgets expended, and the number of beneficiaries by year).

FERF: \$35,431 (ATLANTIC support from 1999 through February 2004)

Clean water systems projects: \$349,125 (ATLANTIC support 1999 through 2004)

Commune Clinic/District Hospital renovations: Hoa Phat Commune Clinic \$14,145 USD. Duy Xuyen District Hospital (Obstetric & Surgical Wards) \$164,404 USD. Duc Pho Health Station \$10,000 USD. Other Medical Equipment and related support to Da Nang, Hue, and Quang Tri hospitals \$110,843 USD for period 1999-2004 (e.g., ultrasounds; monitors; surgery equipment).

Operation Walk: \$34,000 USD as a two-year grant (2001-2002) to Dr. Paul Wade and his visiting teams. Covered primarily the airfare and per diem of visiting medical staff while they were in Vietnam working at the Da Nang City Hospital or DORC.

Schools: \$1,082,613 USD (from 1999-February 2004)

Compassion Homes and Resettlement Houses: \$425,097 USD (from 1999-February 2004)

Da Nang Eye Hospital: The project is in the proposal stage and has not yet been approved for detailed design and implementation.

c. Achievements/Impact

Over the past five years (1999-2003), The Atlantic Philanthropies has provided funds for humanitarian projects implemented by EMWF, that have directly benefited at least 282,459 people including child heart patients, children with disabilities, homeless families, poor rural farm families, children in school, and many other families in economically disadvantaged areas of central Vietnam. Table 1 entitled “East Meets West Humanitarian Projects Funded by the Atlantic Philanthropies for the Period 1999- February 2004” provides a detailed breakdown of the types and numbers of EMWF projects supported Atlantic Philanthropies, including the budgets expended and the number of beneficiaries from each project by year and location. A rough estimate of the average cost per beneficiary is obtained by dividing the total expenditures (\$3,686,250 USD) by the estimated number of beneficiaries (282,459), which results in a average cost per beneficiary of slightly more than \$13 USD per person. However, it should be pointed out that the number of true beneficiaries could actually be even higher than those estimated here. (See Table 1 at the back of the report for a listing of all Atlantic Philanthropies supported EMWF humanitarian projects, according to budget amount, number of beneficiaries, and year of activity).

FERF: Between 2000 and 2003 ATLANTIC has supported a total of 781 families participating in the FERF (For more details see Table 1. East Meets West Humanitarian Projects Funded by the Atlantic Philanthropies for the Period 1999-February 2004.

The ATLANTIC consultant interviewed two families benefiting from the FERF fund which is partially supported by ATLANTIC funds. The EMWF social worker Ms. Huong reported that there were 290 FERF patients in 2003 compared to about 189 HHP patients surgeries in 2003 from Da Nang city and neighboring provinces. Ms. Huong works with Da Nang Hospital, Hue Central Hospital, DORC, and the Heart Institute in HCMC and has authorization to approve funds for HHP patients and FERF clients. John Ward and his social worker at the Quang Tri Office in Dong Ha village, handle the HHP and FERF programs in Quang Tri and Quang Binh provinces. Doctors at the hospitals will call directly to the EMWF offices and make a request for assistance for a FERF patient, and submit the FERF form to EMWF from the hospital or rehabilitation center.

FERF Case A: The ATLANTIC consultant interviewed an 11 year-old girl named Hieu and her mother from Duy An commune in Quang Nam Province (36 kilometers from Da Nang). The daughter has a serious hip defect which was discovered two years ago. The Da Nang Orthopedic and Rehabilitation Center (DORC) gave the girl a prescription and an orthotic brace, but the problem has not gotten any better. The hospital advised that if the problem did not get any better, then she should have a hip-bone replacement operation that can only be done at Cho Ray Hospital in HCMC which costs about \$2000, but she hasn't had the operation yet. The day of the interview with the ATLANTIC consultant was the first visit of this family to the EMWF Da Nang office. The patient is taller now and so the brace she received two years ago is too small. EMWF has agreed to pay for her new orthotics brace costing about 1.5 million VND. The first brace is given free, but they charge for the subsequent new ones. Note: the DORC makes prosthetics and orthotics but charges to recover their costs. The next step in this process is that EMWF social worker Ms. Huong will come to the rehabilitation center to pay for the new hip brace, and then go back to the DORC to take a picture of the new brace with the child.

FERF Case B: A mother and her 9-year old son were interviewed during their second visit to EMWF. The first visit was in April 2003, with the problem/condition presenting to EMWF being that the son had had a high fever that had caused inflammation of brain membranes which had caused the boy to be partially paralyzed. Medicine and physical therapy was provided at DORC, which was paid for by EMFW/FERF/ATLANTIC funds in the amount of \$161.32. The woman and her husband are both sub-masons with very little money. Committee on Population Family and Children (CPFC) paid for the boys first trip to HCMC for care and Department of Labor and Social Affairs (DOLISA) and the Red Cross paid for his trip three months ago. At that time the doctors told the boy and his mother to come back again in three months for a follow-up check-up. The boy is now doing much better, but one leg is still rather difficult to use. Although the boy is doing better, he also has difficulty remembering things and he has not returned to school yet, and his tongue motion makes it difficult for him to talk. They need money now to go to HCMC for another check-up, with the trip, medicine, X-ray, etc. costing about 4,700,000 VND or about \$300 USD for 5 days. The mother will stay with friends in HCMC to save on her costs. EMWF must now figure out how much can the family afford. The EMWF country director indicated that EMWF may pay up to 2,000,000 VND or about \$125 USD, and said that EMWF only sometimes pays for the full costs of treatment.

Clean water systems projects: EMWF Da Nang Office has installed the Hoa Chau Water system in 1999-2000, and 24 water systems between 2001-2003, and 14 irrigation systems during the 1999-2003 period with support from ATLANTIC (this includes wells, water tanks, piping, filtering systems and irrigation trenches and pumps) in different locations in Quang Nam province and Da Nang remote communes. The EMWF Quang Tri Office have installed at least 8 more water systems in Quang Tri provinces between 2000-2003.

The ATLANTIC consultant visited water projects in Quang Nam province and Quang Tri province that were supported by ATLANTIC funds. The Quang Tri water project was a water well and water storage tank that was under construction. The Quang Nam water project that was visited was a commune water storage, filter system (a back-flush water filtering system) and piping to houses in about half of one commune in Duy Xuyen District. With ATLANTIC funds, in 2001 EMWF put in a well that pumps water through a filter system to a tower that is gravity fed that goes back down to the commune village Luong Xuyen in Duy Xuyen District through plastic piping that the residents of the village help lay down themselves. The storage tank holds 25 cubic meters of water, and the village may use 4 tanks of water in a day, which the pump and filters continually process. The whole system cost about \$10,000 (tower and wells, piping, fittings, pump and flush system or about \$10 US for each person in the village that is benefiting from it (about 1,000 people). The system sustains itself from the modest water charges from residents, in which about one-third is used for electricity to run the pumps, \$10 a month is paid to each of the two managers, and the extra money has been used to buy two back-up water pumps (about \$400 cost per pump). The village has requested expanding the new water system to serve more of the village (it currently serves about 60% of the village). The village decided to pave the road after the water tower was put in next to the road, using the commune people's committee funds (leverage). Mark Conroy pointed out that EMWF built about 25 water systems in this Duy Xuyen district alone.

During the same visit the ATLANTIC consultant visited one village household that is now connected to the new water supply system in Luong Xuyen village. They are very happy with the new and consistent water supply they now have. The family makes rice paper but the old shallow family well water is not a good water source for making rice paper because it is full of particles and it often has an oily filmy substance on the surface. The old family well also often goes dry during the dry season and they used to have to walk to neighbors houses to get water, so the family doesn't use it much (maybe to wash dishes sometimes). The family now pays for a 20 meter pipe that connects

to the main piping of the new water system. The respondent Mrs. Phuong said she pays 1,000 VND per cubic meter of water and that the family pays 10,000 VND a month for the water she uses (e.g., she uses the piped water for drinking which is filtered but may include some bacteria so it still must be boiled before drinking it). To save money family is also having her old well cleaned. The family is able to grow some very profitable special kinds of vegetables and make and sell rice paper, and keep 6 pigs and will be able to buy a cow for more manure for their garden.

Commune Clinic/District Hospital renovations: ATLANTIC support has been provided for the renovation of a number of government commune health centers and the Duy Xuyen District Hospital in Quang Nam province. The ATLANTIC consultant visited the renovated Hoa Phat commune maternity clinic in Da Nang City and the Duy Xuyen District Hospital in Quang Nam province with Mark Conroy and Ms. Tam from EMWF and a member of the EMWF Board of Trustees on March 5, 2004.

Duy Xuyen District Hospital: Duy Xuyen District contains a population of over 100,000 residents. The new hospital wings, funded by EMWF and ATLANTIC, were opened in February of 2004. It took seven months to build the new building at a cost of approximately \$165,000. The Quang Nam Health Department requested to hospital work about three years ago and the People's Committee also allocated funds to cover the costs of build the Administration and Intensive Care building (leverage) which was built first, then EMWF and ATLANTIC funds were used to build of the new building that houses the surgical and obstetrics wards. In the EMWF new hospital building, the People's Committee also contributed funds to purchase new beds and stainless steel carts (leverage). Mark Conroy, director of EMWF has been seeking donations outside of ATLANTIC funds to get 20 hydraulic beds. After Mark Conroy discussed with the hospital chief (on the day of the ATLANTIC consultant's visit), it was decided that ATLANTIC would only donate 10 hydraulic beds, since the hospital was able to get some extra beds on their own resources. The hospital had \$28,000 but said they needed \$180,000 for the new hospital building that EMWF/ATLANTIC ended up funding (leverage). During the visit the hospital staff also expressed the desire to have an Internal Medicine and Pediatrics building built, they hoped with ATLANTIC funds. Duy Xuyen District is one of the more needy districts in the middle of Quang Nam province. EMWF imported some items (duty free) such as air conditioners (from Thailand), aluminum windows, doors, tiles, floors, plumbing items, sanitary/bathroom items such as toilets, showers (from Korea), paint from Australia, and some items came from Vietnam (where the quality of local items are improving such as window glass and drains, concrete, etc.). EMWF also put in a leaching field and septic tank in the back area near the new hospital building. EMWF was able to save \$25,000 by not putting in an elevator in the new building, because the ICU/Admin building paid for by the People's Committee already had a covered ramp installed for that building and EMWF just connected the two buildings (1st and 2nd floors) for a cost of \$5,000 instead of putting in a \$30,000 elevator. There are many examples of how EMWF made cost-effective and innovative decisions in the construction and renovations of medical facilities which ensure quality infrastructure at economical cost.

Hoa Phat Maternity Clinic, Da Nang City: Funds from the Pittsburgh Sister City Group as well as some limited funds from ATLANTIC were used to renovate the Hoa Phat Maternity Clinic. Of the 39 government health clinics in Da Nang City, EMWF chose this one because the Hoa Phat clinic was in a very low location and flooded regularly during the rainy season. EMWF not only thoroughly renovated all rooms and sections of the clinic, but also raised the ground level and road by 1 meter. The EMWF-renovated Hoa Phat Clinic was opened on November 11th, 2001. The clinic is staffed by to doctors, 3 nurses, 2 midwives, and 1 cleaner. The nurse interviewed at the clinic (who had been at the clinic since 1999) reported that before the renovation the clinic used to have about 10-15 clients per day, but since the renovations they have about 30-40 clients per day. She reported that the staff like the clinic much better now with its new and bigger rooms and better

furnishings. She also mentioned that the clients are more happy and tell their friends about the improved clinic. Data from the Hoa Phat commune maternity clinic showed that the total number of primary health care (PHC) exams at the clinic increased steadily by more than six-fold between 2000 (1,054 PHC exams at the clinic) and 2003 (6,477 PHC exams at the clinic), and that the total number of deliveries at the clinic more than doubled between 2000 (105 deliveries) and 2003 (227 deliveries). NOTE: It was noted that a new Da Nang City 600 bed hospital was planned for Nguyen Hanh Son District, and that a number of specialty hospitals and institutes for Da Nang City were also planned (e.g., Ob/Gyn; Oncology; Pediatrics). The ATLANTIC consultant's visit to the clinic received a letter of appreciation expressing the thanks of the clinic for the renovation.

Operation Walk: Approximately 183 operations were performed with the assistance of 17 Australian and 4 American physicians and 4 physical therapists under this project, working in a total of five Hospitals and six outreach clinics in Central Vietnam. The hospitals included Da Nang City Hospital, the Da Nang Orthopedic and Rehabilitation Center (DORC), Quang Tri Provincial Hospital, Hiep Duc District Hospital, and the Vietnam Cuban Hospital in Dong Hoi town of Quang Binh Province hospital. A Total of 23 weeks of doctors donated time in Central Vietnam was provided in nine visits. A reported 1,008 patient were examined at the outreach clinics, and 1,725 outpatients were reviewed at DORC. Separate reports were prepared for Quang Tri Hospital and DORC. (For more details see 7-page Report by Dr. Paul Wade, and See also the November 2002 EMWF Newsletter pp.4-5). Including the physical therapists in the ATLANTIC-funded project was found to be very useful, as the therapists provided added benefit to the post-surgery patients and the local staff working with them, bringing new physical therapy techniques, perspectives, and excellent work experience and skills with them. The assistance provided by Operation Walk (supported by ATLANTIC) was very much appreciated by the local hospital surgical staff, and rehabilitation staff and some of the assistance activities are continuing even without ATLANTIC support. The ATLANTIC funds provided the opportunity for highly trained physicians and therapists to come to Vietnam and provide valuable hands-on training and capacity-building. The surgical realignments of the lower limbs provided by this project has given the patients a much better chance for living independently and for having a longer and more productive life.

Schools: In 1999 EMWF Da Nang Office (with ATLANTIC financial support built the Thang Binh kindergartens (20 rooms) and the Tien Phuoc Elementary Schools (6 rooms). In 2000-2001, EMWF Da Nang Office built the 3-D Building for Disadvantaged Children and the Art Center of Love. Between 2001-2003, EMWF Da Nang Office also built some 94 schools (a total of 340 rooms). A total of 23,446 children benefited from these new school constructions

Compassion Homes and Resettlement Houses: In 1999 built 25 houses and other facilities for relocated ethnic minorities. From 2000 to 2003 EMWF built 174 houses for relocation as part of the Da Nang resettlement. In 2003 EMWF also built 11 compassion homes and renovated four houses with support from ATLANTIC.

Da Nang Eye Hospital: Proposal is awaiting approval

d. Challenges/Needs

FERF: There are many disadvantaged people (adults and children) that need financial assistance in covering special and serious health care needs, but with limited ATLANTIC and other funds and limited staff resources at the EMWF, the EMWF can only selectively choose the most serious cases and neediest patients to offer assistance to, and the provinces where these patients come from should probably be confined to where other EMWF humanitarian projects and capacity-building efforts are

concentrated to have a maximum positive impact on the families and communities (communes/wards/districts) where EMWF is working.

Clean water systems projects: There are many communes and districts that need upgrades in their water systems, but with the limited funds and staff resources of the EMWF, the EMWF can only selectively choose a few sites to offer assistance to, and these areas should probably be where other EMWF humanitarian projects and capacity-building efforts are concentrated to have a maximum positive impact on these selected commune/ward areas.

Commune Clinic/District Hospital renovations: Clear physical improvements to the facilities are obvious and have been achieved through the renovations supported by ATLANTIC and EMWF. These facilities are now better lighted, better ventilated, easier to clean, better furnished with more toilet facilities and better use of space. The challenge to ensure that the health professionals and clinic and hospital managers have the appropriate technical and management training and equipment to ensure efficient management of services and patients, ensuring a high quality of care in terms of patient satisfaction, turn-around times, and positive patient health outcomes.

Operation Walk: The Da Nang City Hospital and DORC have lots of trauma surgery needs. Some equipment is still needed for the Surgery Department. The Department of Surgery asked for an inter-operative X-Ray machine (costing approximately \$20,000-\$30,000 USD) but the hospital management evidently said no to this request. Without this X-Ray machine the physicians doing orthopedics and neuro-surgery are now more or less having to guess the correct position for doing joints and fracture work and going into the muscle structure. One of these image intensifier machines is available in the cardiology department for putting in stents (a wire mesh tube that props open the artery that has recently been cleared using angioplasty). They have also requested an orthoscopic set. Much of the equipment, surgical hand tools and brushes (etc.) that the physicians use in Da Nang city hospital are old. They need some good basic surgical instruments, quality hand instruments, including new drills, screws, clamps, etc. They also need a better system of maintenance of the surgical equipment, especially for cleaning and lubricating the instruments, removing rust, and ensuring that procedures for maintaining the sterilized state of the surgical equipment are always followed.

The visiting physician stated that, in addition to better equipment, there is continued need to support management training and better hospital administration to improve patient case management and patient surgery turn-around times. Department's in the hospital need to be given more autonomy in the administration of their Departments. Currently, almost every decision must come from the hospital director, but this process needs to be more decentralized to avoid unnecessary delays and inefficiencies in service delivery. Although some of the physicians have worked overseas and received training there, the old habits die hard and infection prevention procedures and counseling skills must be improved to improve the quality of care and patient outcomes. The visiting physician interviewed reported to the ATLANTIC consultant a number of unsafe practices that were going on which could have a negative effect on infection prevention.

There are bigger **plans for renovation and expanding the Da Nang Orthopedic and Rehabilitation Center (DORC)** in the next few years and proposals are being developed and reviewed by EMWF. Some of the plans are very ambitious (e.g., DORC wants to build a new trauma center and other facilities for \$3.5 million USD). It still needs to be determined if the patient caseload will be big enough and whether the qualified medical staff will be available for such an expansion. EMWF with advice from Dr. Paul Wade are thinking of a smaller scale project in the \$75,000-\$250,000 USD range to renovate/expand the surgery and recovery wards on a two-floor structure at DORC.

Da Nang Eye Hospital: Project has not been fully developed or approved yet. The project and budget should not be too ambitious and based on the real need and demand for services, and keep efficiency and cost-effectiveness and quality of care as priority aspects of the project. The needs assessment/feasibility study should include some estimate of the prevalence (numbers and rates) of eye-related illnesses and blindness, demand for services, types of services needed, and professional health staff and infrastructure needed in the catchment area to be services by the Da Nang Eye Hospital (if this information has not been collected already).

The Da Nang City Health Department's is planning to build a big new **Regional Hospital** across the river and convert some of the Da Nang City Hospital into specialty hospitals. Construction has already started on the foundation of the Regional Hospital. According to Mark Conroy, as for what will happen to the City Hospital it is still unknown. However, Mark Conroy believes the Da Nang City Health Department will be using all of the Da Nang City Hospital for a long time seeing that the location is in the center of the city and it will be a long time before the Regional Hospital is completed. It was also mentioned that it is also very possible that in the future some of the run down City Ward Hospitals services could be moved to the Da Nang Hospital.

e. Leverage and Other Benefits

FERF: The CPFC, local People's Committees, and other NGOs such as CPI will contribute funds for health and other humanitarian assistance for families in great need, sometimes using different criteria for determining need and eligibility.

Clean water systems projects: Local authorities contribute funds and local citizens provide labor for these project

Commune Clinic/District Hospital renovations: Contributions are sometimes received from local health budgets, as well as from outside donors for these activities.

Operation Walk: Approximately \$50,000 in medical/surgical equipment and supplies were donated by the physicians and physical therapists working on this project. Also, there time was also donated free of charge under this project. Thus, the Atlantic support of \$34,000 for generated an even greater value of other support, in the form of equipment donations and international professional medical staff time devoted to performing surgery and/or physical rehabilitation therapy services and training in Vietnam. Among the physician participating in the Operation Walk project there have been at least 24 trips made to Vietnam over the past five years, most of them at their own expense, not from Atlantic funds.

Da Nang Eye Hospital: No information obtained by the ATLANTIC consultant.

f. Recommendations

1. **FERF** (like HHP) is an important life-saving or life-improving EMWF project supported by the Atlantic Philanthropies and that should be continued in the project provinces. Once the new CVC building is completed at Hue Central Hospital, and hospital facilities are further improved at Da Nang City Hospital and Quang Tri General Hospital, the EMWF Da Nang and Quang Tri offices should take advantage even greater advantage of the improved facilities at these locations to refer FERG and HHP patients there for surgery, rehabilitation, or other interventional cardiology

procedures, rather than to further destinations such as HCMC or Hanoi, thus saving ATLANTIC project funds and also time and money on the part of the HHP and FERF patients and their families.

2. The **Operations Walk** surgical intervention support project provided highly evident improvements in the mobility of people with disabilities (e.g., see Dr. Paul Wade's before and after photographs of patients), and ATLANTIC funds gained much leverage in terms of getting volunteer technical expertise and equipment donated from Australian and U.S. health professionals and institutions. Because Operation Walk was cost-effective, brought in highly qualified technical expertise to Vietnam from abroad, and had a high positive public health impact, Atlantic Philanthropies support for such activities should continue and be complemented by more efforts to prevent injury and birth defects through education and behavioral change communication interventions in the project provinces.

3. EMWF projects should determine what the projected catchment population and geographic area, and potential number of beneficiaries in need of specific services to determine the correct magnitude of the size of health service facilities, outreach programs, or size of the water system or schools that are needed. For the hospital construction projects this needs assessment and target population projections may have been done, but in the smaller projects it may not be as systematic or based on actual population supply and demand data.

4. Support for community public health and related humanitarian projects should be comprehensive but focussed in specific project provinces where the need is greatest, and the public health activities should be consistent with and contribute to the achievement of ATLANTIC's Health of Populations Strategy for Vietnam which includes (1) Capacity Building Within Population Health Institutions; (2) Promoting Preventative Behaviour (and population health reform), especially the prevention of communicable diseases and injury, better targeting limited resources, and improving information gathering and analysis; and (3) a Population Health Approach to Vision Protection and Restoration, including the launching of pilot projects in sight restoration and blindness prevention in Vietnam, and developing local level capacity to design and implement prevention initiatives;

5. To have maximum impact in a specific area, ATLANTIC should consider supporting a comprehensive and complimentary set of public health interventions and health sector infrastructure improvements and capacity building activities in a few selected administrative areas where the needs are greatest, which could also then serve as models for other localities to adopt and replicate. This could also include grass roots health education efforts through mass media, interpersonal communication, and theatre formats in EMWF/ATLANTIC-supported Da Nang City, where ATLANTIC support for other public health initiatives (e.g., HHP, FERF, building water systems, new clinics or district hospital, and health worker capacity building) are also underway. A number of key health messages could be incorporated on injury prevention, rehabilitation, blindness prevention and treatment, prevention of communicable diseases (e.g., HIV/AIDS and other sexually transmitted diseases), drug and alcohol abuse prevention, etc. Atlantic is planning to support more comprehensive community-based health systems in other parts of Vietnam as well (e.g., possibly in Thai Nguyen, Thai Binh and Can Tho provinces).

C. Hue Central Hospital

A major area of EMWF and Atlantic Philanthropies support has been targeted at Hue Central Hospital, in Thua-Thien Hue Province in central Vietnam. Perhaps the largest scale ATLANTIC-supported health sector activities undertaken to date in Hue have been the construction of a brand new four-story Pediatrics Building at Hue Central Hospital. In addition, the government has recently approved the project to construct a new Cardiovascular Center (CVC) next to the new Pediatrics Building, with an approved ATLANTIC budget that is substantially higher than the budget for the Pediatrics Building.

The ATLANTIC consultant visited Hue City and the Hue Central Hospital on February 23-25, 2004 and again on March 3-4, 2004. The ATLANTIC consultant met with senior management and administrative staff of the hospital, the heads of the Pediatrics Department and the Cardiovascular Department. The ATLANTIC consultant conducted interviews with key management and administrative staff, including the director hospital, heads of the Pediatrics and Cardiovascular Department. Interviews were also conducted with John Troha chief of the Hue City Office of Delta Construction Company, who has overall responsibility for the ATLANTIC-funded EMWF hospital construction work at Hue Central Hospital. The ATLANTIC consultant toured all floors and departments of the new ATLANTIC-funded Pediatrics Building, and interviewed at least one health staff member and one patient at each site. The ATLANTIC consultant also visited the Cardiovascular Center (CVC) Project Office and met all staff and interviewed key staff. Interviews were also conducted with The Hospital Director Professor The and the Vice Director Professor Phu, and with ATLANTIC consultant to Hue Central Hospital CVC Project, Mr. Olivier Liacre, as well as EMWF contractor and ATLANTIC consultant John Troha. Mr. Son and Mr. Tuyet (very senior staff member) who work in the hospital's general administration secretariat and also serve with Professor Phu on the CVC Project team. Dr. Hung, Head of the Pediatrics Department was also interviewed. A total of 11 Pediatrics Department staff of various levels and wards were interviewed, and 11 parents of patients (and one 14-year old patients) were interviewed in the Pediatrics Department. Patients and/or their families were asked a number of questions including reason for hospitalization, duration of staff, what they like about the new Pediatrics building, what they don't like (and what they still need or want while staying in the hospital), satisfaction with the hospital staff care and treatment and quality of services, and comparison of the new facility to the old facility (if they visited both places). Similar questions were asked of the staff, except they were asked about duration of working in the Pediatrics Department (rather than duration of stay in the hospital); what their area of work responsibility was; and what other training and/or technical equipment, management/supervision skills, and other possible conveniences/improvements they need to make their service-provision better.

Hospital data on services provided, number of in-patients, exams, surgeries, staffing patterns, donor support for various projects, and especially trend data for various pediatric services and cardiovascular services for the last seven years were obtained from the Hue Central Hospital's Secretariat Office. The trend data allow the analysis of client flow before, during, and after the renovation and new construction work was undertaken.

Interview with John Troha's on EMWF Work and his Evaluation of Design and Construction Work of the Da Nang, Hue and Quang Tri Hospital Facilities:

Upon arriving in Hue on February 23, the ATLANTIC consultant first visited John Troha at the Delta Construction Company Office in Hue, to discuss the ATLANTIC scope of work of

Construction Manager John Troha and myself (ATLANTIC consultant and Public Health Specialist Thomas T. Kane) to identify areas of potential overlap and complementary information that being collected by each consultancy and to coordinate to the extent possible to avoid unnecessary redundancies. I explained my ATLANTIC Scope of Work as described in the consultancy contract. John Troha explained that he was looking at the initial designs of the renovations and new constructions and the subsequent changes and final results in terms of the functioning of the buildings structure and furnishings provided by EMWF with ATLANTIC funding. John Troha he had mostly finished his fieldwork and data collection and was planning to write up his findings soon. Mr. Troha stressed the importance of the architect's focus on the function of the structures, citing the architect's rule "form must follow function". He mentioned that EMWF has almost never gone over budget (in terms of construction costs and equipment and furnishings purchased), EMWF tries to minimize extra costs, strengthens things that are not designed well or don't function well.

With regards to the new Pediatric Building at Hue Central Hospital Mr. Troha mentioned that the Head of the Hue Hospital Pediatrics Department, Dr. Tran Thi Minh Huong, was an excellent, committed, well-organized director and "great top manager". However, in the construction of the new Pediatrics Building, Mr. Troha mentioned that Dr. Huong was not involved in the design stage and he felt that it is a mistake not to involve the end-users fully in the process (i.e., Dr. Huong and senior staff of the Pediatrics Department). Seeking feedback from the patients/clients in the design process would possibly have been helpful too. As with government hospitals throughout Vietnam, decision-making is very much a vertical top-down process which can lead to slow and inefficient actions, and sometimes inappropriate or unneeded activities and procedures. Mr. Troha did not feel that the new Cardiovascular Center (CVC) that was recently approved for construction next to the Pediatrics Building at Hue Central Hospital, would face the same problem as the design process for the Pediatrics Building, because Dr. Phu who will be the head of the CVC Center is also Vice Director for the entire hospital and a CVC project team has been formed with representatives from the Hospital Director's Office, the Administration Secretariat, the Cardiovascular Unit, EMWF staff and ATLANTIC consultant(s) on the team. Dr. Phu is very involved with the design of the CVC and is well aware of the needs for the new center.

Thus, Mr. Troha's ATLANTIC Assessment is focussing more on the design, construction, and what they added after construction (e.g., sinks, telephones, TVs, intercoms, etc.), square meters areas, hard costs, costs per bed. Dr. Kane's evaluation will focus on how the services are used and micro and macro-level impact of the changes on both the staff attitudes and service provisions; the patients/clients satisfaction and outcomes; the public's image of the new facilities and health services being provided; the extent to which the EMWF/ATLANTIC-supported projects created additional leverage for other donors to support the facilities and health services in complementary ways; and what further needs are necessary to provide high-quality well-managed medical and health services to people in the catchment areas needing these services. Dr. Kane is also looking at the community-based health and humanitarian project activities that EMWF provided with ATLANTIC support and capacity-building projects for health professionals that were supported by ATLANTIC funding in the Central provinces of Vietnam (mostly Da Nang and Quang Nam province). Both the positive and possible negative aspects of the project activities are having on staff and patients and their families are also explored. Mr. Troha and Dr. Kane will look at certain aspects of ATLANTIC support for EMWF health sector support, but from different perspectives --- including examination of the quality of planning and interactions between all parties and organizations involved, the positive and negative aspects of the implementation of the relevant activities, sustainability issues, and both the tangible (quantitative) and intangible (qualitative) aspects of the project activities that had direct and/or indirect effects, including the intended and unintended effects of the project.

Mr. Troha mentioned his approach for the construction of health facilities at Hue Central Hospital are based on following the forms and “Guidelines and Procedures for Design and Construction” that are recommended by the Construction Management Association of America (CMAA). Delta Construction Company is a member of CMAA. For the construction work that John Troha and Delta Construction Company oversee for EMWF, they use Construction Management sheets and Quality Assurance Sheets

1. Pediatric Department Building

a. ATLANTIC Supported Activities

EMWF assigned Delta Construction Company with the responsibility of overseeing the construction of a brand new Pediatrics Building at the Hue Central Hospital which was completed in March 2003 with some 200 new beds. The Pediatrics Department has 25 pediatrician doctors (22 at Pediatrician Level I and 3 at Pediatrician Level II), 3 PhDs, 18 masters level physicians, and 13 of the doctors from the Hue Medical School across the street also work at the Pediatrics Department. There are 11 sub-units or wards in the new Department of Pediatrics building: ICU; Respiratory Diseases; Hematological Diseases; Digestive/Gastrointestinal Diseases; Nephrology; Neurology; Cardiology; Neo-Natalogy; Examination Department; Nutrition; and IM. There is also the administration and management offices, supply rooms, the IMCI Center, the X-Ray room, pharmacy, reception areas, children play areas, staff offices and reading rooms, and maintenance/custodial and cleaning services)). There is no rehabilitation center now. There is one elevator system and two sets of stairways that provide access to all four floors of the building and a large atrium in the center of the building. In 2003 (the new building opened in March 2003) there were over 8,000 inpatients that stayed in the Pediatrics Building, a substantial increase over previous years in the old Pediatrics building, with about 20% of the pediatrics patients being in emergency care situations. There are generally more in-patient children than out-patient children coming to the Pediatrics Department as reflected in the monthly and annual statistics for the two categories. Dr. Huong says the reason many parents don't bring their children for out-patients services is that parents money for medicines is limited so many don't come unless it is a serious condition requiring hospital stay. For example, in the week prior to the ATLANTIC consultant interview with Dr. Huong, there were a total of 406 new pediatric patients, with 248 of them being inpatients and only 158 of them being outpatients. The outpatient children that do tend to come are often kidney and cardiovascular patients. However, in the old Pediatrics building they had only in-patients. Although the majority of pediatric patients come to Hue Central Hospital from Thue-Thien Hue province, some also from some neighboring provinces such as Quang Tri and Quang Binh. The eight district health centers and Hue City health centers refer the serious and complicated pediatric cases to Hue Central Hospital. Of the approximately 1,100,000 inhabitants of Thua-Thien Hue province, approximately one-third of them are children. The demands for pediatric services at Hue Central Hospital can fluctuate dramatically from year to year, depending on whether there is an outbreak of dengue fever, a flood, or other periodic epidemic.

Based on a tour of the facilities conducted by the ATLANTIC consultant, the following is a brief description of the rooms and wards set-up and conditions/situation on each floor of the new Pediatrics Building as of the February 23-24, 2004 ATLANTIC consultant visit:

First Floor: General reception area with TV providing patient information; Laboratories (old equipment) and X-ray room (no equipment); Ultrasound Room (very old machine); Endoscopy room (They need a new machine that works better --- the endoscope is 10 years old image is dim, not clear, it's the old hologram style, the fibroscope is also not clear on the monitor which makes it hard

to get an accurate reading of a lesion on patients stomach -- they combine different machines from Japan and Germany to get the images ; Exam Room; Infectious Disease Ward (bacterial infections, dengue fever; malaria patients); Public toilet areas; the IMCI training rooms (finished and set up for training); Department Directors office and some Admin staff offices; Elevator and stairs to other floors (elevator was locked and not in use – patients discouraged from using it with the argument that they misuse it or don't know how to use it).

Second Floor: ICU Ward (10 beds; They had a severe arrhythmia case (about 300 beats per minute), but didn't have an electric shock machine for Cardiac Arrhythmia Disorder – they have to borrow the only one in the entire hospital from the adult cardiac department; they had inappropriate ventilators for infants-they were too big- but had no choice but to use with a make-shift adapter tube); Reception Area for two wards (benches, chairs, and table); Doctors Office and Morning Meeting Room; Post-partum Room and Parent Room (not started using yet); Small Surgery Room (but not set up yet; no equipment yet; pediatric surgery program here hasn't started yet); Store Room; Doctor on Duty Room (three doctors on duty at all times – one covers 3rd and 4th floors; one covers 2nd floor; and one covers ground floor); Classroom (mostly for Students from Hue Medical School; Office for Vice-Chief of the Department (Dr. Dinh Quang Tuan); five rooms for Respiratory Disease (35 hospital beds, but they had 60 patients at the time of the ATLANTIC consultants visit – there were about two children in almost every bed)

Third Floor: Neonatal Ward (children under 30 days old; incubators—some do not have proper control of temperature; have some very old ventilator; one stops working after a short time; they sometimes have to use a hand operated balloon to ventilate child's lungs with staff taking shifts ventilating for hours sometimes); Reception Area with counter, benches chairs (some new and some old and broken furniture); Gastrointestinal Unit; Cardiology Unit (congenital heart disease; two room; observed whole family sharing a bed); Rheumatology in one of Rooms; Staff Meeting Room; Doctor on Duty Room (24 hours – has bed, TV, lockers, toilet shower); Store Room; Nutrition Center (cooking room for special diets; prepare yogurt for patient); Hematology (e.g., acute leukemia; congenital blood diseases); Room for parents (mothers; breastfeeding).

Fourth Floor: Central Lecture Hall; Nephrology Unit (kidney problems, etc.); Endocrinology Room (for the future – Endocrinology is currently with the Nephrology Unit; Neurology is also with the Nephrology Unit currently); Two children play areas with bars (with toys from France “Friends of Hue” group; a nurse supervises the children; play areas not open yet until “Friends of Hue” group comes for opening ceremony); Doctors room; Public Toilets; Doctors Staff Library (no medical books there yet); Resident Physicians Room; Corner Admin Office and computer; Empty room (don't know its intended purpose); Reception area with tables and benches

Roof: People hung up their laundry there to dry; some people took children up there to walk around in the open air.

John Troha mentioned that the construction of the new Pediatrics Building included raising the level of the ground floor of the new building to above the 1999 Hue flood levels. Floods of that magnitude are expected only about once in every hundred years.

A photograph of the completed new Pediatrics Building at Hue Central Hospital is shown below.

b. ATLANTIC Budget: Total Budget for Pediatrics Building was \$1,500,000

As of February 2004, a total of \$1,416,992 have already been spent, with the remaining \$83,000 to be used primarily for buying other accessories for the building, such as additional air conditioners and fans, window blinds and other items to improve ventilation and reduce heat build-up particularly on the East side of the building and on the top floor.

c. Achievements/Impact

The new Pediatrics Building is now completed and fully operational with all departments and wards operating and receiving patients for treatment for almost one year now, with the exception of the X-Ray facility which still lacks X-Ray equipment. Although the main work of the new Pediatrics Building was all completed by March, 2003, the official opening of the new building was on April 14th, 2003. So pediatric services have now been provided in the new Pediatrics Building for approximately one year now. The remaining 83,000 funds of the \$1,500,000 US allocated for the project are being used to add a few accessories that are still needed. The 200 beds includes a 30-bed gastrointestinal department, 40 beds for emergency ICU ward, 20-30 beds for new born with low-birth weight and incubators, respirators and ultrasound equipment.

From the annual reports and annual service statistics for the Pediatrics Department at Hue Central Hospital, the evaluation revealed that in the past 12 months since the new Pediatrics Building was completed and opened for service, there has been an increase in activities at the Center and the number of patients visiting the center. The number of pediatric inpatients has increased from 6,623 in 2000 to 8,350 in 2003 or a 26% increase in three years (see Figure 2 in the back of the report). However, it must be pointed out that in the pediatrics department there can be sharp annual fluctuations in the number of pediatric inpatients, depending on whether there are epidemic outbreaks affecting children (e.g., such as dengue fever which has had an epidemic peak every few years over the past decade.)

After the new Pediatrics Building was opened in 2003, the Minister of Health Madam Chien, Vice Minister of Health Professor Hung, and the Chairman of the Vietnam National Assembly Nguyen Van An visited Hue Central Hospital and the new Pediatric Building and congratulated the hospital on the new Pediatrics Building.

The Pediatrics Department has established an IMCI Center in the new building (Integrated Management of Childhood Illnesses). Young medical doctors now come about 30 different provinces to participate in special IMCI training courses at the center. They have had about 10 training sessions already at the Hue Central Hospital new Pediatrics Building. Prior to the construction of the new Pediatrics Building, this kind of IMCI training could only be done at the big hospitals in Hanoi and HCMC. Dr. The, director of the Hue Central Hospital, is now the Chairman for the IMCI Program for central Vietnam, although IMCI participants come from other areas as well, such as from Can Tho and Long An provinces in the Mekong Delta . There are also courses being organized Maternal and Child Health Trainings for mothers and also for doctors that is funded by UNFPA, including a course planned for November 17-December 4, 2004 for 22 doctors, with 12 training course units in the curriculum.

Dr. Huong, Pediatrics Department, is very happy with the new building, and the new Pediatrics Department and its activities are receiving awards and positive attention, and more clients. Dr. Huong hopes for even more patients/clients and expanded programs in the future. She is a very committed doctor and manager, and appreciative of the new Pediatric building, saying “the heavens rescued her, this is the best year of my life”.

The success of a department depends in part on the leadership as well as the quality of facilities, equipment and staff skills and training. Dr. Huong has taken important and independent initiatives to improve services in the Pediatric Ward, including the regular collection of feedback from patients and their families and also from staff and students and trainees through the use of self-evaluation forms and training evaluation forms. Dr. Huong wanted to know how well each staff member works, what the patients needs are, and how effective hospital/department trainings are. This initiative was the result of Dr. Huong going to national level professional training meetings teaching senior staff how to improve hospital services and performance, how to evaluate quality of health services. Initiatives such as those undertaken by Dr. Huong to evaluate and improve the management of and quality of services and training, are as important, if not more important, as having a brand new or renovated building or state of the art equipment at the facility. Some of the feedback Dr. Huong received from the patients and their family members included information on who the best and most caring and attentive nurses and doctors were, the need to “get the elevator functioning and let 4th floor patients use the elevator”, “the doctors and nurses are working better now than last year”, “the TVs are too high, please lower them so that the patients can see them better”.

As was done in the Da Nang City Hospital on urgings from EMWF, Hue Central Hospital has also adopted the practice of hiring a well-managed outside cleaning company “Hoan My” to clean the entire hospital (including the new Pediatrics Building), and this is making visible positive improvements in the hygiene and attractiveness of the hospital. Dr. Huong is particularly careful in ensuring that the new Pediatrics Building is kept very clean and hygienic at all times. It costs about 22 million VND a month (or about \$1,400) to keep the Pediatrics Building clean, which the hospital pays for, but it is a worthwhile investment. The Pediatrics Department is particularly hard to keep clean with so many children patients and many family members visiting all the time.

To identify the acceptability, satisfaction, and impact the new Pediatrics Building has had on the hospital services and staff, and on the patients and their visiting families attitudes, and also to identify any shortcomings or special needs that still exist for achieving quality health service delivery, from both the patients and pediatric staff perspectives, a number of interviews were conducted by the ATLANTIC consultant. At least one staff member (at any level) and one patient or patient family member was interviewed in each functioning ward of the new Pediatrics Building. A total of 22 interviews were conducted by the ATLANTIC consultant in the new Pediatrics Building. A total of 12 pediatrics department staff (from department head to custodian/cleaner) were interviewed and 10 patients or patient’s family members were interviewed by the ATLANTIC consultant in the new Pediatrics Building on February 23-24, 2004. Only one mother of a patient approached for an interview refused to participate in an interview. Below is a brief summary of some of the responses from the staff, patients and/or their visiting family members.

Pediatric Department Patient and/or Family Member Responses:

Patient/Client 1: The 32 year-old mother of a 14 month old patient suffering from fever and convulsions in the respiratory ward was interviewed. They had been in the Pediatrics Department for three days and four nights and the mother slept there too. The mother had also used the old pediatrics ward for another child a few years ago. The mother said the new Pediatrics building “is very beautiful and more clean”. She said she likes everything about the new pediatrics ward. She said the services were very quick and that the staff gave good advice.

Patient/Client 2: An interview was conducted with the 46 year-old mother of an 8 year-old girl in the ICU unit suffering from serious fever and heart disease. This was the first time she had come to Hue Central Hospital from her home in Phu Vang District. She said she is very satisfied with the

new Pediatrics Building, she likes it, its beautiful, and that she has no bad things to say about it. She said even her father likes the new building.

Patient/Client 3: An interview was conducted with the 44-year old father (from Huong Thuy District) of a 3-month old girl with lung problems who had recently been transferred from the ICU to the Respiratory Ward. He said that compared to the old pediatrics building, the new building is very beautiful, clean, and new.

Patient/Client 4: An interview was conducted with the 32-year old mother of a two and a half year old girl who had been staying for the past two days in the cardiology ward with a high fever and other symptoms. The mother had been to the old pediatric building and said this building is much better, including the cleanliness of the physical building and the health services provided are better. However, she mentioned that the plastic bed mattress material is too hot for them to lie down on. She also mentioned that in the evening when the windows and doors are closed, that it is very difficult to breath, and that in the morning it is very hot when the sun comes up on the East side. Note: Her daughter's bed was nearest to the window and on the East side of the building. The old building had just wooden beds on iron with flat slats (space between them that could breathe) and they used the traditional woven mats.

Patient/Client 5: The 32-year old mother of a 20-month old boy who had vomiting and diarrhea was interviewed in the Gastrointestinal Ward (3rd floor) where they had been staying for the past two days. The woman had previously visited her nephew in the old pediatrics building. The mother said the new building was clean and beautiful and "Number 1". The woman said the health workers were very good, but that the toilet drainage is very bad (i.e., the shower room flooded easily; but the toilet was okay). [Note: most beds observed had two children in each bed. People bring their own food or buy it on the street, and eat it in the rooms or in the halls].

Patient/Client 6: The 33-year old mother of a 6-day old boy suffering from fever was interviewed. The woman had not been to the old pediatrics building. In the room (on the West Side of the Building) for mothers of new-borns, they had mostly had straw mats on top of the mattress instead of sheets. The mother said the service was good and the place was clean and cool (and the grandmother who was also there said the building was beautiful). The mother said the beds were comfortable and smooth. A group question was posed to all the women in the room (12 women) are things that needed to be improved further. They responded in consensus that the children must go a long way for them to get X-ray and ultrasound tests, and they suggested that a covered corridor from the Obstetrics/Gynecology Department to the Pediatrics Department Building be constructed. Currently, the newborns must be transported more than 60 meters in open air to get to the Pediatrics Building.

Patient/Client 7: A 41-year-old mother of a three-year old boy with kidney disease was interviewed in the Nephrology Ward on the 4th floor. The mother had not visited the old pediatrics building. The Vietnamese family came from where they were living in Suvanakhet in Laos, because there were no nephrologists in Laos, and she had heard about a doctor here at Hue Central Hospital. She said the doctor is "very thoughtful in his treatment". The mother said the ward is very clean, that the health worker staff clean it very often. The mother said "This is a state hospital, but I have to pay for treatment, 3 million VND for a month (including medicines). She spent one month here with her son before Tet, then went to Laos for Tet, and since Tet she has spent more than a week here in the ward where she sleeps with her child. She says the toilets are good. She doesn't use the elevator, because the building security people say the elevator is only for patients in an emergency. She used the elevator only once in the beginning when her child was very ill. [Note: One doctor commented that he never uses the elevator because electricity is costly and he uses the stairs for

exercise. Comments were made that elevators are strange to many people coming to the hospital – children play in them and kids push all the buttons; babies are fed in them; people don't know how to use them. Similar problems occur with the showers sinks and toilets for people from rural areas]

Patient/Client 8: A 14-year old boy patient was interviewed. He had been staying in the Hematology ward of the Pediatrics Department for the past 18 days with a blood problem (bleeding nose and dots appearing on his skin. He had also visited to old pediatrics building before. The boy said he likes the new Pediatrics Building much better: “its very clean, the building is in very good condition, there is hot water, there are cover sheets for the beds”. He mentioned that the old building did not have hot water for the patients/families. He also likes the TV for watching (it is outside his room but he can go watch).

Patient/Client 9: An interview was conducted with the 37-year old father of an 11 month old boy who was in the hospital for seven days with a brain infection. The mother was present in the ward too. The father had been to the old pediatrics building as well. The father said “the service here is more thoughtful” and the space here is very comfortable, nice and convenient. He said that every day the doctor comes and asks questions and gives advice, and that every day the staff cleaners come and clean the room two times a day.

Patient/Client 10: The 31-year old mother of a six-month old boy patient was interviewed. She was from Phong Dien District and had not been to the old pediatric building before. She and her son had been staying in the Pediatrics Building for two days and said the Pediatrics Building was very comfortable and clean and had no recommendations for improving anything.

Pediatric Department Staff Responses:

Staff 1: The Vice Director of the Department said the New Pediatrics Building is a very modern building for providing health services to patients, but he stressed the need for more equipment to improve services to patients (“equipment appropriate to the patients”). He pointed out that there is “no ventilation or bad ventilation in the building – its very hot in summer”. [Note: Ceiling ventilation fans have recently been added in the atrium, venetian blinds have been put up on a number of windows, and there are plans to provide some more air conditioners for certain rooms to help alleviate the ventilation and heat problem, but if the heat and ventilation problems persist through this next summer/hot season, more interventions may be needed to cool things down and circulate the air better (e.g., outside awnings and or balconies, tinted windows, more ceiling or standing fans, more ceiling vents, and special shading or sun-breaks for the roof that heats up). Bars were also put on the ground floor windows, so that ground floor windows could be opened for ventilation without posing a security risk of possible thefts]. He mentioned when it is hot in the summer it is hard to focus on reading, they need more fresh air, and he mentioned it was very noisy in the new building.

Staff 2: One pediatrician from the ICU Unit stated the for “well-trained staff”. He and some other staff had been trained or worked abroad and he said that he learned important new and effective approaches to providing health care. “ We see different ways of doing things”. He also felt it was very helpful to have national and international experts come to the Hue Pediatrics Department to train staff here in their stations. He said that the noise (echoing halls and atrium) and the ventilation is worse than in the old building. He complained that the air in the new building is still stuffy and not well-ventilated. “When we enter in the room, its very hard to breath”. He also mentioned that there was water leakage in the staff hall area, which he believed came from the second floor patient toilet/shower room which does not have good drainage. He said the problem existed for two months but they only repaired it yesterday (the day before the interview). Another staff member pointed out

that the shower drains in the patient toilet areas are too small and the shower floor fills up with water quickly and floods over. [Note: Mark Conroy said that putting in bell-drop drains could help that situation] The ICU doctor mentioned that the neonatal ward had only one good new ventilator. When the other ventilators break or stop functioning after a period of time, they have to use a hand “balloon” pump which they can’t control the exact volume and pressure, and this can be dangerous to the alveoli “air sacs” which can be destroyed if there is too much pressure. He said they sometimes have to hand pump for more than 24 hours, with the students, nurses, and doctors taking shifts with the hand pump.

Staff 3: A health worker interviewed in the Cardiology Ward on the third floor, said she had worked in the old pediatrics building and that it was now very good working conditions for her working in the new building except that the water drainage was not good. “When patients take showers the water is retained in the floor, the drainage is closed and the water doesn’t go down.” She also said in the winter the temperature is okay but in the summer it is very hot compared to the old building and the ventilation is not so good. She also said that they lacked some supplies and equipment, and that although they now have more beds and cabinets than before, they still have more patients than beds.

Staff 4: One staff member mentioned that the new building had no emergency access for ambulances, though they had expressed their desire to have it before, but the building review board did not include emergency access. The Staff member felt it was important to have emergency ambulance access in order to transfer serious cases to the building’s ICU unit. The staff member also expressed the opinion that sinks should be in the different patient rooms so that the doctors can wash their hands.

Staff 5 and 6: Two cleaning person from the contracted cleaning company “Hoan My Company” were interviewed (one a female age 23 and the other a female aged 42). The company’s headquarters is in Hanoi, but there is a branch office in Da Nang. The cleaning people work in two shifts of 8 hours each, with a total of 15 people plus one supervisor covering the Pediatrics Building alone. The two workers only work in the Pediatrics Building. They both reported taking a two weeks training course in the beginning of their employment to teach them how to work in the hospital setting and how to handle medical waste. A basic worker is paid 500,000 VND per month.

Staff 7: A pediatric respiratory ward physician who had been working there for two year was interviewed, who had also worked for three years in Germany. He said the new building was better and the working conditions were better than before and that it was a very nice building, but that they “lack medical equipment.” He mentioned that the hospital can’t afford to buy equipment for all wards. The hand pumps pressure should be at about 20 pressure, but sometimes it goes to 35 pressure level. He said they need invasive methods such as the use of a bronchoscope for children with pneumonia relapses. The bronchoscope helps diagnose respiratory problems and aspirate foreign objects. He also said they needed an electro-encephalographic (helmet) EEG equipment for children with epilepsy, so they can treat those patients properly. The physician said the Pediatrics Department organization and layout was good, but there wasn’t good cooperation between the Ob/Gyn Department and the Neonatal Department (in Pediatrics), but that good cooperation was needed. There is no pediatrician in the Ob/Gyn Department, but they must decide where to treat the child. This is poor cooperation is particularly a problem when both the mother and child need treatment.

It was also mentioned by one physician that “when you close the windows in the summer you get very poor ventilation which is very dangerous with the bacteria circulating under the fans.” “In the winter it can also get cold and wet, and we have no heaters” (concerns expressed about hypothermia

for some patients). A/C is only in the neonatal ward and the ICU ward, and not in the staff offices, including Dr. Huong's Office. However, there are fans in all the rooms.

Staff 8: An interview with a physician from the Hue Hospital planning department who is also a CVC project officer, mentioned that the new Pediatrics Building is very comfortable and convenient for patients, but the staff had complained that the building was hot. He said the building is now less hot after EMWF responded by putting in additional ceiling/roof ventilation in during the April-May period (a very hot time) or about a month after the building first opened. The staff member is also responsible for the hospital's information system. He indicated that some mistakes were made in the design of the gas system and also in the information system which cost extra money and time during the construction period. He reported that the government architect (Mr. Vu Hoang Hac) was selected to design the Pediatrics Building (and who was also chosen to design the CVC Building) but that EMWF did not have much experience in designing large medical buildings like the Pediatrics Center. Although some sunblinds have been put up on the East side of the Pediatrics Building and on the top floor and other areas, he said more blinds and shade is needed to block out the sun from some other windows. He mentioned that EMWF will provide some air-conditioners for the main meeting hall in the Pediatrics Building.

Staff 9: A staff nurse interviewed in the nephrology/neurology ward said that the new building was very convenient and comfortable to the staff working there, and that sanitation, toilets, and shower is better for the patient to use than before in the old pediatrics building. She said the patients now have good beds and mattresses to use. The beds used before were wooden, old hard to clean and the mattresses were bad before. She expressed a need for a printer for the computer they have for making the required weekly and monthly reports. She and other doctors expressed the need for printers on their floors – one doctor said they must share only one printer for the whole building. The nurse said it is still very hot in the summer even with two ceiling fans; the heat makes her very tired; and the fourth floor is particularly hot because the heat comes through the roof. She said in the summer months the patients have higher body temperatures, but she said it is very comfortable in the winter months.

Staff 10: A sixth-year male medical student (age 27 years) from Hue Medical School who was working in the Pediatrics Department of the Hospital was interviewed. He said it is a better working environment than the old pediatrics department. However, he mentioned in the old building the medical students had a bed for sleeping, but that here in the new Pediatrics Building he has no bed so he can only sit while he is here. He also said it is very crowded for medical students when they use the small meeting hall in the new Pediatrics Buildings, and suggests they could use the large meeting hall, but does not know why the large meeting hall is not in use.

Staff 11: A nurse interviewed from the Gastrointestinal Ward of the Pediatrics Department said her units lacked bed and that they had two patients per bed, with some patients complaining that it uncomfortable with two patients per bed. The nurse mentioned that in the summer time they sometimes have to put three patients in one bed. On the day of the ATLANTIC consultant interview they had 40 in-patients but only 22 beds. She said having 50 beds for this ward would be much better. She said she has no washing sink inside her office, but would like to have one so she can wash her hands more often and more conveniently. The nurse confirmed that the environment is now clean and better than the old pediatrics building. She also mentioned it was very hot in the summer and hard to breath then. The summer is from about late March-July and that it was evidently still hot to some people even after EMWF/Delta's subcontractors put in the added roof/ceiling ventilation in.

Staff 12: Dr. Huong, the head of the Pediatrics Department of Hue Central Hospital and her senior staff were also interviewed. Her feedback is included in other sections of this report on the new Pediatrics Building.

The feedback received from the interviews with patients and their family members, and from the Pediatrics Department staff is generally that the patients, families, and the communities from where they are coming from know well about the improved Pediatrics Department and much cleaner, better-furnished and more comfortable pediatrics wards. The families and patients in the hospital usually mentioned that the new facilities are much better than before, lighter, more spacious, with more bathrooms, and cleaner. There were some complaints from both the staff and clients about the shower drains overflowing and flooding occurring near or under some of the bathroom. This is an engineering issue, which Mark Conroy and John Troha are addressing not only with the issue of the size of piping, but also the need to put in large bell-drop drains instead of the smaller drains (and gooseneck type pipes) that exist there now. This should reduce flooding and hair “wicking” in the drains causing smells to come up the drains.

d. Challenges/Needs

The construction completion date was 10 months late because of problems they had with one of the construction contractors “Thue-Thien Hue Construction Company” which did some faulty piping work that had to be redone with a liquidation settlement of \$64,185, and that company was fired and had to be replaced. It has been sometimes difficult for EMWF and Delta Construction Company and various construction contractors to renovate and build new buildings according to international standards when there are not trained staff to build according to such standards, when supervision is given less than full-time attention, and when contractors and subcontractors are involved in corruption or in taking short-cuts by using cheaper materials and/or quicker, sloppier techniques and procedures than required. Mr. Troha also noted the difficulties in doing quality renovations compared to new constructions, because you often don’t have the original building drawings to work from and you are often dealing with old buildings in seriously deteriorating condition that may be hard to salvage and/or fully upgrade within the budget.

Dr. The, hospital director, mentioned that it would be good if the new Pediatrics Department Building could add some additional beds for times when demand is particularly high (e.g., when there is a dengue fever outbreak). There are also specialty departments that need some beds for children referred there (e.g., Ear Nose, Throat (ENT); ophthalmology; dermatology; and pediatric surgery --- about 10 beds each). Dr. The also mentioned the difficulties in following-up with the suggestion of possibly adding an operating room/surgical theatre in the new Pediatrics building, citing the expensive cost of fitting and maintaining such a facility separate from the surgery department. A pediatric operating theatre would require a group of as many as five pediatric surgeons with different specialties (e.g., trauma, thoracic, gastrointestinal, urology), and a pre-op and post-op room would also be necessary.) For trauma accidents they need different size surgical operation sets for children who are small.

Dr. Huong and her staff have prepared a list of medical equipment and supplies needed for the Pediatrics Department in the new building. During the visit by the ATLANTIC consultant to all of the wards and departments of the Pediatric Building and during the interviews with the staff, it was clear that there was still a lack of up-to-date, functioning medical equipment, including necessary high-tech equipment in some wards. Some of the incubators and ventilators/respirators were old, not functioning properly or not functioning at all, and more new units were needed. During the time of the ATLANTIC consultants visit ultra-sound equipment for pediatrics was added to the Pediatric Departments list of equipment needed. Unlike the case of Da Nang City Hospital in which JICA was

planning to completely equip all ATLANTIC-funded new buildings and renovated buildings with new medical equipment, there were no comprehensive plans or specific donors identified at Hue Central Hospital to provide such equipment or funds to acquire it.

Since family members often must share the bed with their child and other patients and their families on a sleep rotation basis, the idea is being explored to build a guesthouse villa for family members, so they do not have to sleep in the patient beds and hallways of the Pediatrics Department and cook on the floors, and do personal laundry in the ward bathrooms, where the toilets, sinks and showers can get jammed-up and flooded from over use or improper use of the bathroom facilities.

Excessive heat and not enough ventilation and shading in the summer time may still be an issue for the Pediatrics Building, although efforts have been made to add more air vents in the roof, venetian blinds, and more fans and air-conditioners may be installed. Tinted windows may help, and inside venetian blinds do not greatly reduce the heat, but outside balconies or outside shade awnings over windows and on the roof could help a lot.

While visiting the various wards and interviewing staff, a number of equipment requests were spontaneously mentioned, including new incubators, respirators/ventilators, a fixed X-ray machine, a mobile X-ray machine (or moveable radiograph), new diagnostic and monitoring equipment, ultrasound equipment for pediatrics, small sets of small size surgical equipment for children, computer and/or printers ward staff offices, and LCD computer video image projectors for weekly medical presentations. The justifications for the equipment seemed reasonable. For example, they currently had a patient on an artificial respirator intubation and they couldn't move the patient --- so a moveable radiograph (mobile X-ray machine) would be very useful in such cases. The entire Hue Central Hospital has only one moveable radiograph and it is used only for adults in the main ICU ward. There is an X-ray room in the new Pediatrics Building, but no X-ray equipment, with the room not getting used, staying closed up and with no Air Conditioning there is much condensation with is affecting the ceiling and furnishings in the room

With the increasing number of pediatrics clients/patients, Dr. Huong feels more responsibility and a greater need for more up-to-date and functioning equipment to meet the increased demand. However, John Troha indicated that the remaining \$83,000 dollars in the new Pediatrics Building budget is going to be used for more immediate needs such as sinks, Air Conditioners, suction bottles, stainless steel window bars for safety, and venetian blinds for heavy solar gain, particularly on the East side of the building. It was mentioned by one respondent that the health people in Hanoi, HCMC, and in Da Nang all say that Hue Central Hospital has very little medical equipment to work with. Since EMWF and ATLANTIC usually don't purchase medical equipment, but rather only hospital furnishings such as sinks, hospital beds, carts, chairs and counters, the hospital needs to make efforts to find other donors to pick up the costs of these important items, that are essential for providing high quality care. ATLANTIC could help out in this process by contacting other donors as well.

e. Leverage and Other Benefits

There are expanded opportunities for training, with support from other donors and institutions. The construction of the new Pediatrics Building has created very ample space for patients but also for a new IMCI (Integrated Management of Childhood Illnesses). Such training could previously only be done at the large hospitals in Hanoi and HCMC. Other donors such as UNFPA are now supporting training courses Maternal and Child Health being offered in the new Pediatrics Building of the Hue Central Hospital for mothers and also for doctors. The Hue Medical School sends about 200 medical students per term (or 800 students per year) to the Hue Central Hospital to do a practicum

and learn about childhood illnesses at the Pediatrics Department, and all the medical students are also reported to be benefiting from the better facilities in the new building. There is also post-graduate internship and masters training in Pediatrics, which in the new facility is now accommodating about 15 resident interns and 15 master degree trainees each year. Approximately 20 doctors a year work at the Pediatrics Department on Pediatrics Degrees Level I, and 6-8 doctors work towards Pediatrics Degree Level II. The approximately 500 nursing students and 200 midwifery students who train at the Hue secondary medical school also train at every ward in the Hue Central Hospital, but mainly in pediatric and internal medicine.

An Integrated Management of Childhood Illnesses (IMCI) Training Center has been established in the New Pediatrics Building of the Hue Central Hospital, and there are 15 national lecturers who train on IMCI here. The program is based on the IMCI program developed by the WHO. The IMCI Center is for IMCI training for the central provinces. The seven provinces included now are Thue-Thien Hue, Quang Tri, Quang Binh, Quang Nam, Tien Giang, An Giang, and Tra Vinh, but other provinces will be added later. The National IMCI program currently includes 17 provinces and one Japanese organization has assisted the Hue Central Hospital program to expand from 2 national lecturers to the current 15 lecturers. 70 doctors have already been trained in IMCI (5 days of lectures and 11 days of practice). UNICEF has provided funding for Quang Tri province to participate, because it is a particularly poor province, and the World Bank has funded Quang Nam's participation.

The ATLANTIC consultant was also informed that some small teams of Japanese NGOs are also helping to support Pediatrics work in the new Pediatrics Building, but the details of this support was not obtained.

With the increasing patient load, there is an increased demand for new, functioning medical equipment. Unfortunately, no other donors have stepped forward to fund the purchase of the relatively large list of equipment needs, so the list has remained the same for some time now, in fact, it is getting longer as time goes on, without the necessary financial support coming in. In the case of Da Nang City Hospital the Japanese organization JICA is planning to provide three to five million dollars USD to purchase new hospital equipment for the EMWF/ATLANTIC funded new buildings and renovated buildings. However, no such leverage has been found for the new Pediatrics Building at Hue Central Hospital.

A French Group has provided toys for the children's play rooms on the 4th floor and the ground level.

f. Recommendations

1. Action needs to be taken to get other donors involved in the funding of much needed medical equipment and training of hospital staff in the Pediatrics Department.
2. ATLANTIC should consider funding a hospital guesthouse for pediatric patient families, by itself or in consortium with other donors, especially if the pediatric patient load continues to increase and room for parents staying in the building is reduced.
3. The Pediatrics Department should have more decentralized authority/autonomy, or at least greater involvement in decision-making for the operation of and growth in the activities of the Pediatrics Department.

4. With the Pediatrics Building now complete, ATLANTIC should consider supporting the capacity-building of the technical monitoring and managerial skills of the key staff in the new Pediatrics Department of this Level I hospital in Central Vietnam: i.e., training of pediatrics and hospital senior staff in hospital management; providing ward staff (doctors and nurses) with training in patient and family counseling skills that are often lacking; training senior and junior health staff how to ensure quality of care through good monitoring and supervision of provider-client interactions, counseling, making referrals, technical competence of health providers in the required exams and procedures, infection prevention procedures (e.g., practicing universal precautions, basic hygiene practices in the wards, and cleaning and maintenance of wards and equipment), logistics management and record-keeping.

5. EMWF should continue to monitor the plumbing and drainage and heat/ventilation situation in EMWF/ATLANTIC renovated buildings and the new buildings in all three hospitals (Quang Tri General Hospital Trauma & Pediatric Wing; Hue Central Hospital Pediatrics Building, and the Da Nang City Hospital renovated and new buildings) to determine that the plumbing and ventilation is adequate for ensuring a safe air temperature and a well-functioning and hygienic plumbing, toilet and drainage system. This issue may have already been reported in the ATLANTIC construction consultants report (Troha Consultants Report, April 2004), but it is mentioned here because the issues of poor drainage and poor ventilation/excessive heat in the summer in the Hue Pediatrics Building were raised in the February/March 2004 interviews that I conducted with some hospital staff, patients and patients' visiting family members. EMWF and its contractors have already addressed some of the mentioned problems of plumbing and air ventilation, but more work may still be necessary to better resolve any continuing problems in these areas.

2. Cardiovascular Center (CVC)

a. ATLANTIC Supported Activities

With support from ATLANTIC and EMWF, a new cardiovascular center (CVC) building is planned to be built next to the new Pediatrics Building. The CVC will include an internal medicine cardiology department and a surgery department (bypass operations, thoracic-cardiovascular surgery; chest surgery department, tumor and lung surgery). A Feasibility Study was completed in August 2003.

The ATLANTIC consultant met and interviewed Dr. Phu who will head the new CVC center and toured and interviewed staff at the CVC project office, near the cardiovascular department, and accompanied Dr. Phu to observe two surgeries being performed in the surgery operation theatres where all cardiovascular and other major surgeries are performed. A complicated surgery on a three-year old child with a congenital heart defect was observed. Dr. Phu mentioned that there is a long waiting list for operations at the Hue Central Hospital. Dr. Phu also informed the ATLANTIC consultant that the CVC project was approved by the national government on February 23, 2004 (See MOH communication No. 5411/QD.BYT dated February 23, 2004 announcing full authorization of the CVC project).

The ATLANTIC consultant requested and received data from the hospital on trends in cardiovascular inpatients, bypass heart surgeries, and interventional (closed heart) cardiovascular procedures performed at the Hue Central Hospital for the passed seven years. These data could serve as a baseline data for the CVC Project, to compare to the number and types of cardiovascular services that will be provided at the CVC once it is completed and operational.

During the past seven years the number of cardiovascular surgeries and procedures have increased rapidly from 130 open heart surgeries in 2000 to 289 open-heart surgeries in 2003, more than doubling in three years. The number of closed heart cardiological procedures has also increased substantially in the past three years increasing from 40 procedures in 2000 to 65 procedures in 2003, a 62 percent increase in three years. Figure 3 (in the back of the report) shows that the total number of cardiology in-patients has also been steadily increasing from 1,476 in 1998 to 4,020 in 2003, almost tripling over the past five years. Increasingly, Health Heart Program patients are being referred to Hue Central Hospital rather than sending them all the way down to the Heart Institute in HCMC. In the March 2004 interview, Dr. Phu reported that they used to do about one heart surgery a day and now they do two heart operations a day, on average.

Olivier Liacre who worked for five and a half years with the Heart Institute in HCMC as a representative of the Alain Carpentier Foundation, was hired by ATLANTIC to give management advice to Hue Central Hospital as it develops the CVC project. Olivier assisted the hospital in developing a new integrated configuration which puts cardiology work, and cardiovascular surgery and the heart surgery operation theatre under the same roof and management structure in the new CVC. The new building will be approximately 11,018 square meters, while including multiple surgical theatres, anesthesiology, administration, examination rooms, diagnostic laboratories, rehabilitation wards, and other cardiology and cardiovascular specialty areas and facilities for staff and patients. One initial feasibility study has already been completed. A key concern is the integrated management of the various components of the CVC. The plan is to ultimately have four operation theatres doing cardiac, thoracic and pulmonary surgery, but the first priority will likely be to get two operation theatres operational as soon as possible, and then add two more later. According to the CVC Project proposal in the first year of operation of the new CVC a total of 200 interventional heart ventilations (e.g., angioplasty and stents) are planned, 200 more for the second year, and 400 for the third year of the CVC operation. In addition, a total 1000 surgeries (including 500 heart surgeries and 500 other chest surgeries) are planned for the first year of the CVC's operation and the same number for the second year of CVC operation. In the third year of CVC operation a total of 1,500 surgeries are planned (including 800 heart surgeries and 700 other chest surgeries). Alain Carpentier visited Hue back in October of 1998 to explore the idea of developing a modern cardiovascular intervention and surgery center in the central region of Vietnam and the current Hue CVC project has been under preparation for over two years now. Mr. Son of the Hue Central Hospital Administrative Secretariat and also a member of the CVC Project staff is currently preparing a Master Plan for the CVC, working together with Dr. Phu, Dr. The, Dr. Lam Mr. Tuyen and Mr. Ngoc who are also on the ATLANTIC-supported CVC planning team.

b. ATLANTIC Budget: Preliminary Budget is \$3,800,000

The project will need to cover costs of construction, procure fixtures (e.g., sinks, toilets, plugs, gas, etc.); operation tables, beds; equipment to re-use and new equipment needed (see list), obtain second-hand equipment and rehabilitated equipment.

c. Achievements/Impact

During the ATLANTIC consultants visit to the Hue Central Hospital approval was received from the national government (Prime Ministers Office) for the new Cardiovascular Center. With the official approval, demolition began to tear down the old buildings on the site where the new CVC is to be built, which is right next to the new Pediatrics Building. A drawing of the CVC building is show below. The new CVC will provide cardiovascular surgical services and interventional cardiological procedures (such as dilatations, angioplasties, and stenting) to primarily the central provinces of

Vietnam, covering a population of approximately 15 million people. It will likely be more than a year before the final planning and construction of the CVC building will be completed and ready for operation.

d. Challenges/Needs

EMWF now has a list of equipment needed for the new Cardiovascular Center has been prepared. The idea has been promised of possibly combining a new operation theatre in the new CVC with the Pediatric Building which is right next door. In 1999 Hue Central Hospital received for the first time a new C-Arm and related monitoring equipment (provided by the Government of Luxembourg) to give the Hue cardiovascular center the capacity to do interventional cardiovascular procedures (e.g., catheterizations, dilatations, angioplasties, and stenting), such as those being done at the Heart Institute in HCMC. The list of equipment includes a Digital DSA because the quality of the cardiograph images are not so good.

Two differences between the Heart Institute and the Hue Central Hospital CVC, is that Hue Hospital is a public hospital and also a university hospital, while the Heart Institute in neither. Dr. Phu, Vice Director of the hospital is the key Vietnamese medical person at Hue Central Hospital CVC project, as was Dr. Vinh, Vice Director at the Heart Institute. It may be very advisable to hire an international consultant experienced in international standards level cardiovascular centers and Cath-labs to work with the center for the first two years of operation.

For the CVC to be successful support for high-quality training to develop a strong CVC medical cadre at Hue Hospital cardiologist and cardiovascular surgeons at Cath-labs and cardiovascular surgery centers abroad (e.g., France, U.S. or Australia) and/or in Vietnam are necessary. Dr. Phu has become a very accomplished heart surgeon in the country, and another very promising cardiologist at the Hue Central Hospital who was trained by Dr. Vinh is Dr. Du. These individuals are important in-house staff who can also help build a strong CVC team.

In his interviews with ATLANTIC consultant (i.e., myself, Thomas Kane), management consultant Olivier Liacre suggested that integrated management is necessary for the success of the CVC; that decentralization of decision-making within the hospital can also contribute to increased efficiency and effectiveness (but this is difficult to do in a centrally planned government hospital); that planning is necessary for identifying, screening and treating clients in a timely and manageable fashion; and that costing issues for the different types of operations and interventional cardiology procedures must be figured out or the hospital could lose money on each operation (threatening the long-term sustainability of the CVC services provided). Management must be given a high priority, monitoring and evaluation data need to be systematically collected and used, continuous training and capacity-building conducted for key staff; and cost-recovery issues addressed, and logistics planning system established, including the acquisition and maintenance of medical equipment and supplies. MOH and international donor assistance may be needed for a number of these priority areas in the CVC's first few years of operation.

In addition to building the CVC structure and procuring the needed state-of-the Art medical equipment, it can't be emphasized enough the importance of ensure proper and efficient management of the facility and services, providing all elements of quality care, recovering costs for sustainability.

e. Leverage and Other Benefits

In 1999 Hue Central Hospital received for the first time a new C-Arm and related monitoring equipment (provided by the Government of Luxembourg) to give the Hue cardiovascular center the capacity to do interventional cardiovascular procedures (e.g., catheterizations, dilatations, angioplasties, and stenting), such as those being done at the Heart Institute in HCMC. The list of equipment includes a Digital DSA because the quality of the cardiograph images are not so good. Some of the cardiovascular doctors are receiving training in France and the United States (all sources of training funding is not know, but some funds come directly from the Hospitals budget).

f. Recommendations

1. The Hue Central Hospital senior management and the CVC project team should consider requesting ATLANTIC support for hiring an international consultant to advise regularly on the management of the new CVC for at least the first two years of the CVC's operation. This will help build local management capacity, and ensure more efficient and effective operation and long-term organizational and financial sustainability of the CVC.

D. Dong Ha Town – Quang Tri Province

The ATLANTIC consultant traveled to Quang Tri Province from March 1-3, 2004 to visit the EMWF Office and meet the staff, visit the Quang Tri General Hospital, visit some of the humanitarian projects supported by ATLANTIC in the province, and visit Kids First Village and talk to staff related to these projects. The Counsel General of Vietnam visited the EMWF offices in San Francisco and also asked ATLANTIC for financial assistance in Quang Tri province, and consequently the decision was made to set up a satellite EMWF office in Quang Tri and post a project director there (John Ward) who arrived in Dong Ha Town in Quang Tri province in November of 1999. EMWF ATLANTIC-supported work in Quang Tri began in the year 2000 with the construction of 13 kindergartens schools in that year in Dong Ha Town (5 schools), Trieu Phong District (4 schools); Gio Lin District (1 school) and Hai Lang District (3 schools). Almost all the EMWF activities area supported with ATLANTIC funding, including kindergarten constructions, water systems, bridges, compassion homes, FERF, HHP, special projects (e.g., Quang Tri General Hospital renovation of three wards; teachers dormitory; rice dryers; Da Nang Dental Clinic Outreach Program); foreign surgeon assistance to Quang Tri Hospital (Paul Wade); cooperation with other NGOs (CPI, VVRP, Plan International; World Vision) and other organizations (LZ Russel Veterans Association; Northland Veterans Association; Office of Genetic Counseling and Disabled Children – Hue Medical College).

[Note: Mark Conroy noted that ATLANTIC provides some \$300,000 (annually ???) to support EMWF offices in Da Nang and Quang Tri and the EMWF Headquarters Office in San Francisco.]

During the three days in Quang Tri I interviewed and spent a great deal of time with the EMWF office head for Quang Tri, Mr. John Ward. Together we visited one water project (well and water tower) under construction, two kindergarten/preschools build with ATLANTIC money in two communes/wards of Quang Tri, and the Quang Tri General Hospital (on the first of my two visits to the hospital). During my visits to the EMWF office I also met and interviewed the EMWF social worker Ms. Tran Thi Khanh Van , and Ms. Ngo an EMWF Dong Ha Office administrative assistant. One of the key EMWF Quang Tri Office staff member, Ms. Trang was in Hanoi studying English in preparation for an international fellowship for graduate study supported by the Ford Foundation. Ms. Trang was involved with the EMWF/ATLANTIC supported hospital renovations at Quang Tri

Hospital. The EMWF Office staff arranged for me to interview two Healthy Heart Program patients and their mothers during my visit. I also interviewed Mr. Roger Ferrell, President of Kids First Foundation. I also met briefly with the representative of Clear Path International (CPI), Mr. Hugh Hosman, to discuss the complimentary activities of CPI, which coordinates with EMWF activities in Quang Tri and Quang Binh. CPI provides victim assistance for people maimed by landmines, and the families of those killed by unexploded ordinance (e.g., they build compassion homes, wells, provide home improvements, pay death benefits for new victims or hospital costs, re-do surgery or provide prosthetic limbs for post 1975 injuries.

Quang Tri province and neighboring Quang Binh are among the poorest provinces in Viet Nam. The population of Quang Tri province in 2004 is approximately 600,000 and Quang Binh province's population in 2004 is approximately 820,000 inhabitants.

1. Quang Tri Hospital Building Renovation (Trauma Surgery 1 and 2 and Pediatric Ward)

a. ATLANTIC Supported Activities

ATLANTIC and EMWF has supported the renovation of an entire three-floor wing of the Quang Tri General Hospital, which includes a pre-surgery ward, post-surgery ward and a pediatrics ward. Renovation work started in March-April 2002 and the major work was finished about one year later, but some additional repair work was necessary. The contractor company workers and supervisors were not cooperative. They made some big mistakes on the plumbing and the contractor had to be fired (E.g., They had used poor quality plastic pipes with faulty joints and so the plumbing didn't work and had to be redone). John Troha of Delta Construction then supervised the reinstallation of steel pipes later on. Previously, the patients rooms were very crowded with 8 patients per room plus families with only one public toilet per floor, making infection control difficult, and the sinks were getting stopped up all the time and the bathrooms were wet and dirty all the time.

The present Quang Tri General Hospital was commissioned in 1997 after a 10 year wait between the design and construction (due to a shortage of funds). There are currently 348 hospital staff, including 70 staff with university degrees, MDs or engineering degrees, 157 nurses and midwives, 60 custodian/cleaners, and 50 post-graduate doctor specialists (1 Ph.D., 5 MAs, 43 Grade Level I MD specialist; and 1 Grade Level II MD specialist), and 12 nurses with BA degrees.

The Quang Tri General Hospital does not contract out custodial cleaning services, While Da Nang City Hospital and Hue Central Hospital do. At the present time the hospital administration thinks that hiring out the work to a contractor is "out of the question". The reasons given are that (a) the 60 custodians would be out of work and it would be difficult to absorb the 60 custodial workers into the hospital employee pool without training or re-training; (b) the contractor would need to be monitored for its services performed and they would have pay out the contractors money for services performed (but the hospital but is limited).

Quang Tri General Hospital also has 10 maintenance staff, including one who comes under the Administration Unit, one who comes under the Utilities Unit, and one who comes under the Technical Department to care of medical instruments.

b. ATLANTIC Budget: \$198,000 USD of ATLANTIC fund for Pediatric Ward and Trauma 1 & 2 Surgery Wards Renovation at Da Nang City Hospital. Another \$8,000 was paid for by ATLANTIC for a mini-doppler for the Pediatrics Department and for three-months training in Hue for a female doctor from Quang Tri General Hospital.

c. Achievements/Impact

The renovations were all completed by April 2003, except for some corrections in the plumbing/piping work which had to be redone during the summer of 2003. Bathrooms have been installed in every patient room, aluminum windows and doors installed, tiled walls and floors, ceiling fans, and new hospital beds provided and other equipment and furnishings.

During the March 1-2 visits to Quang Tri General Hospital interviews were conducted with 11 hospital staff (7 were more in-depth – one with the hospital director and interviews with two staff in each of the three renovated wards) and 6 patients (two in each of the three renovated wards). A summary of the of the interviews are shown below.

Staff 1: The Director of the Hospital, Dr. Le Van Thanh expressed his gratitude to ATLANTIC and EMWF for their timely upgrading the surgery and pediatrics wing, that had recently been commissioned after one year of upgrading construction work. He said the hospital staff and provincial leaders highly appreciate the support. He mentioned that since the hospital wing has been upgraded there has been an increase in the number of staff working in the three wards of the renovated wing. The renovation of the two trauma wards and the pediatrics ward increased the usable space in each rooms having a total of 100 hospital beds with new ones. The NGO Clear Path International (CPI) provided 50 hospital beds (second hand beds). There are still cases of two to three patients sometimes sharing a bed, but the patients insist on staying there. He said the patients have very much confidence in the facility now and in the capacity of the staff. He and his colleagues evaluation of the relations with the EMWF is that “it is excellent and we enjoy an excellent rapport”. Before renovation they only had one doctor in pediatrics at the pediatrics ward, but now they have two pediatrician doctors there, so capacity has improved. There are now three doctors (1 Ph.D. and 2 MAs in the trauma outpatient area and one with a specialty in digestive surgery. The province and government invested in training of medical staff during the renovation period.

Staff 2: The doctor interviewed in the Trauma Unit on the first floor had been working the hospital for 15 years. He said his ward has about 50 patients a day, on average. He said the facilities are better and more attractive to patients and their families after the renovations. He said “the working environment is very comfortable and hygienic” , but he mentioned there were still some drawbacks in the water supply and drainage system. He said just a couple of days earlier the first floor was inundated, because there was no drainage, and he blamed the contractors. They said the water was smelly and may have been back-up water from the septic tank and they had to evacuate the patients temporarily. He also said there were some problems with the electricity system as a result of the excess water. He mentioned that the new electricity system is generally very good, but that the leaky water from the second floor affected the ceiling fans for awhile. He said the pipes were blocked somehow and that the families of patients have to stop putting food and cleaning utensils in the sinks. He also said that when it rains there is a lot of water discharged from upstairs.

Staff 3: The nurse interviewed in the Trauma ward 1 had worked here for more than two years and before the renovations were done. We have clean and more spacious environment and a better set of beds allocated for the needs of the patients. Then number of beds is the same, but the rooms are more spacious and there are also more patients coming now. It is also an advantage that the oxygen

outlets are now near the beds and there are now sanitation/toilet facilities in the patient rooms where there were none in the past. She also mentioned some drainage problems, saying that the showers don't drain well, and the discharged water doesn't drain fast enough and floods the floor.

Staff 4: The Head of the Trauma 2 ward was interviewed. The doctor had been working there for 17 years. He thanked the donors on behalf of both the staff and the patients for the support given to help them provide health care. He said, that although far from being perfect, the renovations are a great help for providing good services. He said the ambiance is an obvious sign of the new rooms, which are much more clean, spacious and comfortable. He also said there was better ventilation and illumination. He said it is now much easier to keep the rooms clean which gives the patients much peace of mind. He said we are determined to make the system work for the benefit of the patients. He did mention that the ventilation still leaves something to be desired, citing that the ceilings are not high enough and that the corridor is not wide enough, with not enough air coming in from the outside. However, he recognized that the renovations had to conform to the original design and they could not change the height and width of the building. Some of the furniture was old, coming from the old ward, and they didn't have enough of the furniture that is needed. He mentioned that in the past the ward had only one bathroom and it was impossible to keep it clean, but now the situation is much better. He recommended a new building rather than renovations to have enough light, space and comfort in the future.

[Note: They had some plastic thick mattresses in the room that were not brand new]

Staff 5: A ward custodian was interviewed, a woman who had been working there for a number of years before the renovation. She said that in general the renovated wing was much better. She said "Its much easier to see dirt and to clean the ward with the tile floors and walls. Before we could not see the dirt. Everything in every respect is much superior than in the past. In the past we had one toilet for the whole ward. Now toilets are in each room and we can clean each toilet room and remind patients to keep them clean". She also said "there are not enough of some items (e.g., gloves, sandals, cloths) which the custodians have their own money to buy. She said most custodians have only one pair and they tend to wear out. She said there were four staff rooms on each floor and that Air conditioning would be good to have in some of these. Only the Post-operation room has an A/C, but she said the emergency room should also have one.

Staff 6: The deputy director of the Pediatrics Ward was interviewed (Dr. Bui Thi Ngoc Oanh). The ward has 40 beds but sometimes have 80 patients daily. Usually mothers are with their six children under age 16. The ward has children under 16 years of age for health reasons other than surgery. The doctor said the main difference since the renovations has been the increase in the amount of serviceable area, even though the total area has not increased. The corridors are now better used, converted into toilets and washrooms. The doctor expressed some continuing concerns: "for us working in the Pediatrics Ward there are some things we don't feel safe about because there are many children in the ward. For instance the electric plugs and sockets and the sinks (the diameter of the drainage pipes – we don't think the dimensions are big enough – we think they should be larger). Waste matter is another big issue for us. Each patient is normally accompanied by a relative. Receiving 80 patients a day means accommodating 160 persons which generates a large amount of waste" The doctor has some technical criticisms about the staff room door frame not being firm because it was installed after the tile floor was in place and some of the wall door frame was starting to come off. She said it should be embedded in the floor and may need more putty, and some screws have come out already. She recommended that the contractor should pay more attention to these details. She also mentioned that the rooms on the 3rd floor (top floor) are "hot like an oven" in the evenings, there is no insulation from the sun's heat. She also said the window pains absorbed direct light and heat, and suggested that colored glass and shade awnings may help mitigate the heat.

[Note: these construction issues may have already been addressed in the ATLANTIC construction consultants report].

Staff 7: A nurse from the Pediatrics Ward was also interviewed. She mentioned that prior to the building of the present Quang Tri General Hospital, the Dutch government had donated a pre-fabricated hospital which lasted for several years. She thought the room set aside exclusively for laundry was a waste of space and that it should be made into a multi-purpose room for patients and families. She said “this is a renovated building so we have to accept it, but there is no space for children to play.” They have toys locked in a cabinet (e.g., small cars and other wheeled toys), that she said they dare not give them to the children in the hallways because it would be dangerous for the children to play with them with sick patients also in the hallways. She said the present building is better than past one, but that if they had a new and bigger building they could set up a room to provide counseling to mothers, and provide other services as well. For example, they also want to have a place for convalescence care for children, but they are too cramped for space. She would like the children patients to have a place for them to play, hang pictures, even have greeneries. She also mentioned the ward had no large garbage containers, so they must carry waste out in small baskets. They would like a large push garbage container to take out all waste. One of the Pediatrics Ward staff mentioned as I was leaving that the Pediatrics Ward should be on the ground floor. [Note: I noticed spider webs on the Mickey Mouse dolls on top of the children’s toy cabinet; and the wheeled and plastic/metal toys are kept locked in the cabinets and not used – it’s a sad sight. I noticed 4 new incubators that were stored in a corner and covered not in use I was told because of lack of space. I saw another very old incubator and 3 more up-to-date incubators in another room, where a very malnourished underweight infant was being cared for]

Patient 1: The first patient interviewed in the EMWF/ATLANTIC renovated wing of the Quang Tri General Hospital was a 31 year old male who was in the hospital for five days because of an occupational accident that occurred when the tire he was repairing exploded. He said “Having this good facility gives me a good peace of mind to stay and be treated by the doctors and nurses”. He no complaints to mention, except that he said “the mattress is full of moisture and it makes my back feel uneasy”. [Note: The bed mattress was a plastic covered normal looking single bed (not a new hospital bed). The mattress was bent and looked too thick with a mat over it. When I visited the Trauma 1 and Trauma 2 wards (first and second floors) the layout was the same in both floors. In one room I visited there were 12 patients in a total ten beds in the room]

Patient 2: The second patient interviewed was a 74 year old woman in the Trauma 1 ward who had been in the hospital for five days with a broken leg when she was hit by an ox. Her leg will be operated on with a fastener fixed to her bone. She had also visited the ward two years ago before the renovations. Her thoughts on the renovated ward now were as follows: The facilities now are much more spacious, with better water and electricity supply and better care from the nurses. When she was here before she had to share a bed with another patient. She was not pleased with the bed, which had a thick plastic cover on the bed mattress. It was a straw mattress that she was not changed enough, she had been using it for five days in a row with out anyone changing the cover.

Patient 3: A 53 year old woman who had been in the hospital for 15 days (now in the post-operative ward after having kidney surgery) and it was her first time in the hospital (Trauma 2 ward, second floor). She said “everything is satisfactory: a clean environment; devoted nurses; I’m making a quick recovery; My home is far away and I rely entirely on the staff” (She is from Gia Linh District about 16 kilometers from the hospital). She said she would like to see fewer beds in the room so each patient would have more space and more air to breathe. She also said the staff is devoted, but would like to see the doctors more devoted to help make a quicker recovery. She said her family had to share her bed with her and that she wanted more and better medicine for a quicker

recovery [Note: ATLANTIC consultant noted that the air was moving well through the 3rd floor hallway. Normally each patient is accompanied by a family member, but there is no hospital dormitory for them] .

Patient 4: A 60-year old woman was interviewed. She was from 20 kilometers away and had been in the hospital for 7 days (pre-surgery), and was having a kidney operation this afternoon. There was no family member there to care for her, although she had a daughter. Her hands were trembling and she was very nervous. She had been to the hospital about a year ago. She said it is very comfortable, that breakfast is paid for by the hospital –“it’s free”, and that the patients and their families take care of lunch and dinner. She said she had no complaints and that “this is more than I can ask”.

Patient 5: In the Pediatrics Ward on the third floor, I interviewed the 33-year old mother of a 13-month old boy (from Gia Linh District 15 kilometers away) who was having his second stay in the hospital for a period of 3 days (the first stay was ten days, but the child got sick again), suffering from bronchitis and bronchial inflammation. This was the mother’s second child and she had been to the ward before. The mother said the ward is much cleaner now and more spacious. She said her child wants to play, but there was no place for him to play. She also mentioned there was another drawback to the building in that there was no place where the families could air/dry their clothes. She said the laundry room was small and not used much.

Patient 6: A young mother age 22 who was with her 14-month old boy child (first child) was interviewed. They had arrived in the hospital the day before with the child having bronchitis. The mother said it was a very good facility, that the doctors were enthusiastic and attentive to the patients needs. The mother had visited the facility last year before the renovation when her boy had a high fever. She said she is very satisfied with the services and the facility. “There is nothing more that I can ask.” [Note: Another woman in the ward asked me for \$100 and another said half jokingly that 50,000 VND would make us happy. I took a candid photo through a hallway window of one room in the Pediatrics Ward where there were a total of 11 people sitting on three beds next to each other, including doubled up patients and their family members].

d. Challenges/Needs

EMWF and the hospital staff were not happy with the contractor that they had first selected. The first contractor for the hospital renovations was not good and had to be fired for making big errors with the plumbing renovations and other problems. The renovation construction work was supposed to take only three months, but it took much longer and caused some inconveniences for the hospital staff and patients with the delays. However, the work has been completed with very satisfactory final results.

Families still don’t use the toilets properly causing toilet/sink maintenance problems (e.g., people turn the handles too much and break them or they wash all their clothes, or cook their food and clean their dishes dumping food in the sinks and toilets sometimes causing blockage). EMWF thought it may be better for the patients to have uniforms/gowns so that families will no longer be required to wash the patients clothing all the time. The hospital would have to be responsible for cleaning/sterilizing all the hospital gowns. The patients and families (especially those from rural areas) need to regularly be instructed on how to use the bathroom facilities. There were drainage problems reported on the first floor of the renovated building just two days before the ATLANTIC consultants visit.

EMWF submitted a proposal to ATLANTIC in mid-December 2003 for a \$1,000,000 project to tear down an old two-story building at the Quang Tri General Hospital and to put up a new 4,000 square

meter three-story multi-purpose building, which would include internal medicine and cardiovascular wards. The hospital originally wanted a five-story 7,000 square meter building but the ATLANTIC budget was not big enough, so the original hospital plans for a new oncology ward and geriatrics ward would require more space than the three-story building would provide. However, the new three-story structure would be built strong enough to carry a total of five stories/floors in the future.

The improved physical hospital facilities need to have compatible equipment and trained staff to function effectively.

The hospital staff mentioned they have had a few local cases of HIV/AIDS at the Quang Tri General Hospital plus a few transfer cases, but HIV/AIDS cases do not appear to be handled much in the Da Nang City Hospital, Hue Central Hospital or the Quang Tri Hospital. The ATLANTIC consultant did not have time to explore the issue of HIV/AIDS prevention, voluntary counseling and testing, or where AIDS patients care and treatment and support takes place. However, as the HIV/AIDS epidemic continues to spread throughout Vietnam, hospitals and provincial, district, and communal health authorities will increasingly need to factor in this public health problem in their specific health service programs and training.

e. Leverage and Other Benefits

There was more than one reports during the interview that the People's Committee of Quang Tri Province very much likes the EMWF projects because they are practical and useful to the citizens of the province. This was reported from both some of the medical doctors and from a representative of the foreign affairs office of the province as well.

During the EMFW/ATLANTIC funded hospital renovations period the provincial government invested funds for training hospital medical staff. Two doctors were sent for trauma surgery training and one doctor was sent for digestive surgery training and two hospital nurses received BA degrees in nursing during the renovations. The hospital is to be commended for taking a great deal of initiative to send many of its staff for training, with funding coming from the hospital's own budget. They mostly send their medical staff to Bach Mai Hospital in Hanoi, to Hue Central Hospital, and to the major hospitals in HCMC, because overseas training is much too expensive (from the hospital's budget). The Spanish Government soft loan has only a small amount of funds for in-service training only (for staff to learn how to use new equipment).

The Netherlands organization MCNV funded the renovation of the Obstetrics Ward, since EMWF/ATLANTIC was funding the renovation of the Pediatrics Ward as part of the Hospital Wing renovation. It was also reported that other donors gave some small donations in related areas during the renovation period (e.g., Save the Children/U.S. supported capacity-building training for obstetrics; World Vision provided some assistance targeted disabled and handicapped persons and provided some equipment to the hospital on functional rehabilitation; CPI provided assistance targeting mine victims coming to the hospital; and the Trauma Care Foundation (TMC) gave overseas scholarships for doctors training (two scholarships given for training in Cuba; and an organization named Save Lives Save Limbs is planning to provide support sending one or two hospital staff for training in advanced orthopedics and bone grafting at the University Hospital in Northern Norway .

CPI also provided an additional 55 second-hand beds and mattresses for Quang Tri Hospital, though EMWF did not provide any hospital beds as part of the renovations of the two Trauma/Surgery Wards and Pediatric Ward at Quang Tri General Hospital.

The ATLANTIC consultant was informed that the Republic of Korea is funding the Vinh Linh District Hospital in Quang Tri with 150 beds at a level of 10 billion VND.

Quang Tri Hospital made a request to the Peoples' Committee/Government authorities and MOH to expand the hospital from its present 300 approved beds to 500 beds. The People's Committee and MOH approved the expansion plans but there are still budget constraints. As part of the expansion plan EMWF and the Quang Tri General Hospital plans to build the Multi-Purpose Building increase beds there from 100 to 200 beds. The hospital also wants to purchase surgery equipment for staff attending surgery training courses.

The Quang Tri General Hospital is expecting an equipment package of \$1.8 million dollars U.S., using an ODA soft loan from the Government of Spain. They are awaiting the first batch of equipment. The equipment includes surgical equipment, machines such as X-Ray machines, incubators, ventilators, and ultrasound machines. And a CT scanner. All wards are expected to benefit from this aid package.

f. Recommendations

1. EMWF should continue to monitor the plumbing and drainage and heat/ventilation situation in EMWF/ATLANTIC renovated or new buildings in all three hospitals (Quang Tri General Hospital Trauma & Pediatric Wing; Hue Central Hospital Pediatrics Building, and Da Nang City Hospital renovated and new buildings) to determine that the plumbing and ventilation is adequate for ensuring a safe a safe air temperature and hygienic plumbing, toilet and drainage system. It is mentioned here because the issues were raised by some hospital staff, patients and their family members in some wards of all three hospitals (Hue, Quang Tri and Da Nang hospitals) during interviews with the ATLANTIC consultant (myself). Although EMWF and its contractors have already addressed the problems of plumbing and ventilation problems, more work may still be necessary to better resolve any continuing problems in these areas.

2. Once renovations and new buildings constructed with support from ATLANTIC and EMWF are completed, some additional support for appropriate staff training in technical areas, quality of care, and in hospital management would be appropriate for ATLANTIC to ensure proper management of client flow, maintenance of facilities and the provision of high quality care. This will help ensure the sustainability of this ATLANTIC investment. EMWF, ATLANTIC and the hospital management should work together and with other donors to ensure that the improved physical hospital facilities have compatible up-to-date equipment and trained staff for effective functioning of health care services.

3. ATLANTIC and EMWF should continue to be active (even proactive) in contacting and dialoguing with other donors to ensure that the renovated and/or new facilities built with ATLANTIC and EMWF support will have the most appropriate medical equipment, and information and communication system to best serve the patients and assist the hospital staff in their work. Supporting a comprehensive approach to developing health services, which includes building excellent facilities, equipping them appropriately, and training/building capacity of the staff to provide modern high quality health services and manage the hospitals and wards efficiently and effectively, is the best way to ensure positive health outcomes and sustainability of the health institutions being supported by ATLANTIC, EMWF, and other organizations.

2. Kids First Village (in Dong Ha Town)

a. ATLANTIC Supported Activities

Kids First Village is a rehabilitation and career training center for physically disabled youths and also for economically disadvantaged youth. Approximately 80 acres of land has been allocated by the Quang Tri Provincial Government for the Kids First Village complex. The principal is to treat each youth attending the Kids First Village as a whole person, first by assessing their medical needs, getting them healthy and mobile (addressing their mobility needs), integrating them and socializing them through inclusive education and providing them appropriate vocational training. The long term goal is to have the Kids First Village up and running and fully operational and having it be self-sustaining. The kitchen/bakery service, laundry service, and pig-farm (training on animal husbandry) will be some of the income generating activities of the village. There will be approximately 130 students (ages 16-24 years old) in dormitories on the Kid First Village campus.

On March 1, 2004 I interviewed Roger Ferrell just following his visit to The Kids First Village (Tre Em Tren Het) with a group of benefactors from Washington State who were attending the opening of the Kids First Village kitchen. Direct Atlantic Foundation matching fund support in the amount of \$1,000,000 dollars U.S. was provided for this project. The Kids First project was initiated before the ATLANTIC office was fully established in Hanoi, and it is administered from the New York office. (It was not clear to the ATLANTIC consultant how much involvement and responsibility is given to the ATLANTIC Office in Hanoi to oversee this project).

Five buildings have been constructed at the Kids First Village site in Dong Ha Town of Quang Tri Province (The Administration Building; the Kitchen/Bakery/Dining Facility Building; the Mobility Clinic Building; the Medical/Dental Clinic Building; and the Vocational Training Building). The foundation was also being laid down for the new Pavilion Building during the time of the ATLANTIC consultants visit to the Kids First Village on March 2, 2004, that will include a commercial Laundry facility. Dormitories and a Guest hotel for family and other visitors are planned for the future, and there are discussions of having a pig-farm on the grounds where pigs could be bred and sold. There are discussions about having vocational training buildings will have sections from business applications and one for arts and crafts, but there are no specific programs for these ideas yet.

Roger Ferrell mentioned that Sister Bang who is a medical doctor with the Kim Long Charity that runs an AIDS hospice center for AIDS patients in Hue, has been asked to help operate the Kids First Village Medical/Dental Clinic. Mr. Ferrell says that the advantage of using Sister/Dr. Bang is that she has lots of experience with providing grassroots health care without all the government overhead costs. The idea is that Sister Bang will be responsible for staffing the medical clinic and work with visiting doctors from the United States. The principal users of the Medical Clinic would be the 128 students plus the Kids First Village staff for a total of approximately 200 people, but the Women's Union will refer other needy families to clinic as well. Mr. Ferrell said that sister Bang gets her support from other sources. The Presbyterian Church will provide monthly funds to cover clinic costs in the early months of the project (\$600 building rent and about \$400 for health supplies each month). The NGOs working at the Medical Clinic (Kim Long Charity) and the Mobility Clinic (NGO to be determined) will pay rent for the buildings they are working in.

It is also important to note that Mr. Chien who is Vice Chairman for Health and Education on the Quang Tri Province People's Committee and also a member of the National Assembly is supportive of the Kids First Village project.

The plaque outside the Kids First Village Administration Building gives a summary of the main objective of the Project “Kids First and the people of Quang Tri province working together to provide career and technical training and treatment for the disadvantaged in the development of the whole person.”

The three major functionality components of the Kids First Village are:

(1) Treatment: Rehabilitation services and treatment will be available first for those enrolled in the rehabilitation center, and secondly, for people in the community. This will include clinical services for orthotics and prosthetics, hearing, vision, speech, dental, and a women’s clinic; outpatient clinic for family health care, holistic medicine clinic, physical therapy, occupational therapy, personal hygiene clinic, emotional treatment counseling, Art/music therapy, and a pharmacy.

(2) Vocational Training Programs: These may include English Language training; mechanical trades; computer operation and repair; carpentry and woodworking; culinary arts; business management; agriculture; metal working; metal machining; textiles; appliance repair; arts and crafts, leather work; watch repair; personal services; and professional training to train local persons to operate different business units or clinics at the Kids First Village rehabilitation center.

(3) Recreation: Includes arts, music, sports, crafts, pet therapy.

b. ATLANTIC Budget: \$1,000,000 ATLANTIC matching grant

ATLANTIC has provided a \$25,000 grant to take key people from Quang Tri province to the Philippines and the U.S for a study tour of related facilities and explore ideas for the Kids First Village. Matching grant money was obtained in cash and kind from various sources so that the full \$1,000,000 in ATLANTIC funds could be leveraged and used.

ATLANTIC Office in New York administers the Kids First Village project directly and wants the project to stay on schedule and not slow down.

c. Achievements/Impact

Mr. Nguyen Duc Tan of the Department of Foreign Affairs for Quang Tri Province (and also Project Assistant for the Kids First Project) accompanied the ATLANTIC consultant during the visit to Kids First Village and Mr. Nguyen Thanh Hoa, a Vietnamese engineer who is the Delta Construction Company site manager and surveyor for the Kids First Village, also was present during the visit to Kids First Village, to brief the ATLANTIC consultant, show him around and answer any questions that may arise. Delta Construction Company has been the construction company for the project.

Five buildings have been completed which all appear to be very well constructed, with specially designed roofs to help keep the heat out. The Kitchen facility opening was “launched” in the end of February 2004. Construction is now also underway for the Pavilion/laundry building. The Kitchen bakery is fully furnished with stoves, refrigerators, gas and electric appliances, and water purification units.

A brief description of each building toured by the ATLANTIC consultant is provided below:

Administration Building:

The Kids First office will be located in the Administration building. The completed admin building was not fully set up inside, although there were stocks of chairs, shelves, extra toilets, sinks, furniture, and medical equipment and supplies stored in the various rooms (some still in their boxes).

Kitchen/Bakery/Dining Facility:

The kitchen includes a very large dining hall, a middle size dining hall, a large kitchen area, a large bakery room, and a water filtration room, plus restrooms/toilets and storage closets. Saturday February 28th was the opening of the Kitchen and Dining facility, which received a group of bikers/supporters who biked down from Hanoi.

Mobility Clinic:

There is no furniture in the Mobility Clinic Building. The building includes a reception room, 4-5 smaller office-type rooms, two bathrooms, a large open room (presumably for rehabilitation therapy), one medium size open room, and three rooms with just sinks. [Note: although it was a very hot day and none of the buildings visited had air-conditioning, none of the buildings were hot inside at all. This is at least partly due to the way the roofs were constructed very high and angled to deflect sun and shade the hard roof ceilings from direct light and heat. All of the buildings appear to be very well designed and constructed].

Medical/Dental Clinic Building:

The medical/dental clinic had a reception area with counters, desks, some counseling type rooms, an ambulance closed garage room with garage door, and an X-ray room and a machine; an examination room with four examination beds of different types (probably donations); and various other medical equipment such as five crutches, two walkers, one IV-stand, one anesthetic machine, and two dental examination beds/chairs. An organization in Vietnam will manage the Medical Clinic, with Mercer Island Presbyterian Church providing a commitment of \$100,000 for five years.

Industrial Vocational Training Building:

This 6000 square foot building has two major sections that mirrored each other in design, with one section to be devoted to metal work and the other devoted to woodwork. Each section had on very large room for vocational training, with high-ceiling and very large sliding doors to the outside and a female toilet room and male toilet room for the students/workers (female toilet room had two toilets and one sink; and the male toilet room had two urinals, one toilet and two sinks); there was also a front entrance and office room in each of the two sections, with a bathroom (toilet and sink) next to offices; and then a observation and work-break room upstairs in each of the two sections of the building (with wall/ceiling fans). There was no vocational training equipment at the site, as of the March 2, 2004 visit of the ATLANTIC consultant. Kids First plans to work with Whirlwind Wheelchair International to set-up a wheelchair manufacturing project at Kids First Village and Kids First is also working with People Energy Transportation (P.E.T.) to develop wheelchair alternatives that allow for carrying items from farming to the market or for carrying a users child with them .

They are planning to build four more buildings/complexes: The Laundry Building (the foundation was being laid during the time of the ATLANTIC consultants visit, and the construction was expected to be finished in about three month, i.e., by June 2004); and later on a Pavilion Building; A 2-3 story Hotel/Guest House for visitors; and Student Dormitories (up to four dorm buildings planned).

The Pavilion building that is being constructed will be able to accommodate events such as weddings, sitting 200-400 people. The Laundry Building and the Pavilion structure that will be off

the ground somewhat built up on concrete slab foundations. The Kids First president is working with a supplier in the U.S. to find laundry equipment for the Laundry Building.

Kids First is currently working with local contractors for construction bids for the Kids First Village Dormitory, based on the working drawings, and construction of the Dormitory is expected to take place later in 2004. The group "Seeks Design" has agreed to do preliminary drawings for the Guest Hotel.

According to the October 15, 2003 Progress Report on the Kids First Village, two full-time administrative people are working at the Village: one is the administrative assistant to the manager of the Pig Farm and the other is assistant to the in-country representative for Kids First.

Mr. Tan, Kids First Project Assistant (a staff of the Quang Tri Foreign Affairs Office) went to the U.S. to visit the "Do it" technology program supporting disabled people using computers that is a part of outreach program of the University of Washington in Seattle. (Note: A key person is Karalee Woody who is a member of the "Do it" technology program, is on the Board of Directors of Kids First, and is the Director of Student Access and Computing Group, Educational Partnerships and Learning Technologies at the University of Washington).

The date when Kids First Village will become operational with students enrolled residents is expected to be later in 2004. In a recent Kids First Progress Report it was mentioned that now that the Kitchen and Dining Facility are completed, Kids First Village can start receiving students as soon as the training program is established. The start of training is not dependent on the dormitory being completed, because they can begin by serving students from the local area who can commute to the Kids First Village each day. Construction of the dormitories is expected to take place in 2004.

d. Challenges/Needs

This is an ambitious and diversified project and needs a lot of careful on-site competent management and supervision of a range of buildings, project activities and services.

The identification of exact socio-demographic and disability structure of the trainees/students at Kids First Village needs to be determined. Gender and age compositions, and who the trainees are, what specific kinds of disabilities the trainees are likely to have, where they will come from in terms of districts and/or provinces, and what proportion of the trainees/student body will be economically disadvantaged children (but not physically or mentally disabled). The socio-demographic and disability structure of the student body will partially determine the nature and focus of training and demand for specific services (rehabilitation, health care, and specific type of vocational training) that would need to be provided at the Village.

Staffing the various components and buildings of the Kids First Village Project is a key issue that deserves careful attention. An excellent overall manager and administrator will need to be recruited for on-site management and supervision of this multi-disciplinary project. Staff with an excellent national or international experience in the disability/rehabilitation, vocational training, medical care, and kitchen/bakery field will be needed.

Quang Tri is a less accessible and more remote province and does not get the international donor and international NGO attention that it deserves. Full-time effort for fund-raising and resource development will be needed to sustain the Kids First Village for at next five to ten years.

Sustainability for all components of the program, including salaries, cost recovery issues, and the continued maintenance of the facilities and equipment and supply of needed materials are important

questions. For example, who will pay for the residents meals, medicines, books, etc. It will be important to keep all buildings and components of the Kids First Village funded and operating continuously, even though different NGOs and different donors on different funding cycles and different levels of program support will be involved in different components of the Kids First Village Project. The Project cannot be managed from the U.S. or HCMC, and all key staff should be based at Kids First Village in Dong Ha.

Roger Ferrell, president of Kids First Vietnam, is based in Ho Chi Minh City, with a home also in Washington State, USA. A major question of importance is who and how will the diversified activities of Kids First Village be managed. It requires someone with knowledge and experience in working with disadvantage and disabled children in developing countries. Staff with a range of different expertise are required (e.g., those with clinical and dental skills, technical vocational training skills, cooking/bakery kitchen cafeteria management skills; physical rehabilitation therapy skills, and other skills as well).

The ATLANTIC consultant was not able to visit Sister Bong (MD) of the Charity Clinic in Hue who may be managing the Kid First Village Medical Clinic during the visits to Hue and Quang Tri province, although Mr. Ferrell provided their contact address of 32 Kim Long Street in Hue (Tel: 05-452-8454). Roger Ferrell said Sister Bang and her colleague Sister Diem (also an MD) have done excellent work in getting health and development services to the beneficiaries with minimum bureaucracy costs.

Mr. Ferrell mentioned that it was a problem two to three years ago in estimating the cost of the project, stating that construction costs in Quang Tri are quite high, and more than originally anticipated. Mr. Ferrell also thought it might be useful to support three Vietnamese artists to visit the U.S. (e.g., Seattle, San Francisco, and Dallas) to promote the arts in Vietnam and the Kids First Village.

e. Leverage and Other Benefits

ATLANTIC provided \$1,000,000 for the Kids First Village Project and Roger Ferrell reported that Kids First NGO was able to raise \$1,200,000 from other sources (see also Kids First Report to ATLANTIC for more details).

Mercer Island Presbyterian Church have made a \$100,000 contributions commitment over a five year period, and have said they would support a medical clinic (but that they could not manage it themselves and asked for a partner which they have decided they would like to have Sister Bong of the Kim Long Charity work with them. The Medical/Dental Clinic was designed by a architectural firm in Seattle Washington, and the building includes reception, examination and counseling room an X-ray room, a dental care area and a garage for a medical van. Cartons of medical supplies and equipment have also been provided by the Mercer Island Presbyterian Church. Exam tables, dental chairs, X-ray equipment and supplies worth more than \$60,000 have already been contributed.

The Rotary Club of Seattle has raised approximately \$250,000.

Ms. Shirley Forsgren, was the Executive Director of the Prosthetics Outreach Foundation in Seattle Washington for about 20 years has been actively working to raise funds for state-of the art equipment and for the operation of the mobility clinic for a five-to-seven year period. She has received \$80,000-\$90,000 in commitments so far and her budget is \$240,000 for a five-year period.

The Rotary Club of Seattle Washington provided \$100,000 towards the building of the kitchen/bakery for the Kids First Village.

Roger Ferrell said they will be working the Hoa Sua School Training/Restaurant/Bakery program in Hanoi (Madame Vi) in training 40 disadvantaged youth for a year. The Hoa Sua program may also provide some assistance/advice in setting up the kitchen/bakery/dining facility training program at the Kids First Village. The Kids First bakery will have a person who designs bakery products and some bakery products will be shipped out for sale elsewhere.

There is also a \$75,000 grant from the American World Jewish Service for a training program for a high standard wheelchair factory that will be built. Training would be provided for the welding and metalwork on a wheelchair design designed by Joel Smith an Engineer from Seattle Washington, that has comfortable seats made from an injection molding technique. Ken Bering a multi-millionaire who has set up a wheelchair foundation has committed to have Vietnam manufacture 10,000 wheelchairs a year for worldwide distribution (for a total of 2 million produced in Vietnam), with the goal of making a \$15 profit on every wheelchair. The market for the wheelchairs is the approximately 80 percent of people who need and can fit and use the standard requirement wheelchairs. The plan is to have the Kids First Wheelchair Manufacturing Company be a 100Percent foreign owned company, which they have already received an agreement from the government to have tax free status for five years. The government is giving 1,000 square meters building in an industrial park very close to the Kids First Village, where they walk to every day

With other (non-ATLANTIC) funding a first project called Kids First School for disabled and disadvantaged children was set up about three kilometers from the Kids First Village in Dong Ha Town. The school is for primary age children from first to fifth grade levels. The school was opened on September 4, 2000. Mr. Tan said there are about 320 poor children supported at the school, including 100 disabled children. University of Washington has provided a computer lab for the School. The Kids First Village project work should complement the Kids First School activities and could be a place where some of the disadvantaged children could attend when they reach the 16-24 age group. A donation of \$50 supports one child in the Kids First School for one year. A scholarship package provided to disabled and disadvantaged children includes: a warming coat/blanket; notebook; books; pencils; medical insurance; construction fee; handbag; and tuition fee. The Women's Union cooperates with Kids First on these activities, and has evaluated the program and found it very meaningful (according to Mr. Tan's report). [Note: Kids First also provides a language lab for Le Loi High School in Dong Ha Town].

f. Recommendations

1. Essential for the success of Kids First Village program is project management and the recruitment and retention of well-qualified on-site overall project manager and good managers for the various activities proposed at the village. Vietnamese government employees or managers based in Hue or elsewhere should not be employed part-time to run the Kids First Village project in Dong Ha.
2. Sustained donor commitment is likely to be necessary for at least three to five years.
3. The proposed Kids First Village vocational training and rehabilitation programs are very diverse and ambitious requiring a wide range of equipment and technical expertise. Therefore, it is recommended that the proposed activities be prioritized and feasibility of implementation assessed. Careful attention must be given to the recruitment of skilled professionals in each of the training areas selected and a sustainable training program and curriculum plan needs to be developed for each selected activity to be included in the training and rehabilitation program. Selection of activities needs to be based on the potential demand for the particular training (i.e., the likely numbers of students in the training activity; the likely number of persons with specific disabilities

participating in the Kids First Village programs and needing specific rehabilitation services), and also on the ability to recruit appropriate qualified staff for that activity.

3. For the Kids First Village, it could be useful to invite an experienced international NGO to assist Kids First Vietnam in providing on-site overall management of the Kids First Village. A number of non-governmental organizations have experience working in the health field, working with vocational training and income generation programs, working with people with disabilities and with disadvantaged youth in Vietnam. Some organizations (such as Save the Children U.S. and U.K, World Vision International, Plan International, and Pearl S. Buck International) have experience in working in many or all of the above-mentioned areas, both in Vietnam and around the world.

[Note: Some of the INGOs already working in Quang Tri include Save the Children/U.S., World Vision International (WVI), Plan International, are currently working in Quang Tri, as well as some other development NGOs such as EMWF, CPI, MCNV – Netherlands, NABP and NAV – Norwegian agencies, Peace Trees, VVAF and some mine-clearing organizations (SODI-German, MAG-British), Project Renewal (Chuck Searcy)].

3. Humanitarian Projects (HHP; FERF; Water Projects; Schools; Bridges)

a. ATLANTIC Supported Activities

EMWF with funds from ATLANTIC supports a number of humanitarian project in Quang Tri Province and has recently expanded activities to Quang Binh and Thua Thien-Hue provinces in 2003. These activities include construction of kindergartens, participation in the EMWF Healthy Heart Program and FERF; water system projects; bridge construction; and other special projects.

The ATLANTIC consultant visited two two-classroom schools for kindergarten students and one water project (well and storage tower). A number of schools and water projects have been carried out in Quang Tri province with ATLANTIC support.

Quang Tri participates in the EMWF Healthy Heart Program and the Family Emergency Relief Program. The ATLANTIC consultant interviewed two HHP patients and their mothers. The Quang Tri HHP patient candidates get identified through the Committee on Population, Family and Children (CPFC), and then EMWF/QT sends the patient to Hue for a doppler test. If surgery is needed, they do a family assessment (similar to what is done in Da Nang and neighboring provinces), and work with EMWF to see how much the family and EMWF can pay for. They sometimes send the patients to the Heart Institute in HCMC, if it is a complicated case, but it is expensive and may involve several visits. Less complicated are increasingly being referred to Hue Central Hospital. Surgery at the Heart Institute in HCMC can cost 14 million VND for a basic procedure and 27 million VND or more if the operation involves a heart valve. On a couple of occasions EMWF funded patients to go to Hanoi for surgery.

EMWF/QT also supports heart patients from Quang Binh province just north of Quang Tri. Most of the heart patients are under 18 years of age. The CPFC at Quang Binh has actually been more proactive in identifying a list of 180 children already who are possible candidates for heart surgery.

b. ATLANTIC Budget:

All of the EMWF project activities in Quang Tri are supported by ATLANTIC since 2000. The total amount of EMWF project expenditures between January 2000 and December 2003 in Quang Tri Province is \$867,087 USD (excluding heart patients); and the total EMWF/ATLANTIC project expenditures in Quang Binh province during the 2000-2003 period is \$22,983 (excluding heart patients). In 2003 EMWF/Quang Tri Office began implementing some small projects in Quang Binh (construction of four kindergartens and the HHP – 25 family assessments and 11 heart surgeries in 2003) and a rural project in Thua Thien-Hue.

The recently approved Multi-Purpose Building Construction Project for Quang Tri Hospital is reported to be approximately one million dollars USD or slightly more. The Multi-Purpose Hospital Building Project is now at the detailed design stage, with construction likely to begin in 2005 and construction completed in mid-or late 2006.

c. Achievements/Impact

From 2000-2003 and with ATLANTIC financial support, the Quang Tri Office of EMWF has assisted in the construction of 51 kindergartens/schools (one-three rooms per school) in Quang Tri province, and four more kindergartens in Quang Binh Province. ATLANTIC funds have been used to fund a number of other humanitarian projects in addition to the Quang Tri Hospital renovations and kindergarten schools (e.g., 132 HHP family assessments and 92 heart surgeries; FERF for needy families; three bridge renovations or constructions; construction of compassion homes for needy families; eight water projects; 14 collaborative projects with other international NGOs and/or local Vietnamese organizations; and Special Projects such as Teachers Dormitory construction in Hai Chanh Commune; Rice Dryers for co-ops; and EMW Da Nang Dental Clinic Outreach Program to Dong Giang.

In 2004 so far, EMWF Quang Tri Office has started construction of three new schools (one 1-room and two 2-room schools), and in Thua Thien Hue one 3-room primary school is now under construction (with \$9,500 USD coming from VVRP and \$8,000 USD coming from EMWF. In Nghe An province one 4-room primary school has been approved for construction but is not under contract yet (but expected by the end of April).

For a detailed list of ATLANTIC-supported humanitarian and health activities carried out by the EMWF Quang Tri Office please refer to the Endnote #6 at the end of this report. It includes information on the number and type of projects conducted by year, location and size of budget in \$USD.

There is no question that ATLANTIC support for the Healthy Heart Program is saving lives. ATLANTIC support for the improved water systems is undoubtedly improving hygiene and public health (as most studies clearly demonstrate) and it is likely to be reducing morbidity and mortality from water borne diseases in project areas, but no hard evidence has been collected to support this last assertion.

Healthy Heart Program:

Results of the interviews with to HHP patients and their mothers are included below.

HHP/QT Patient 1: The first Quang Tri heart patient/family interviewed was a young girl age 6 and her mother aged 38. The patient was the second child of the mother who worked for the

Department of Construction and the father who works at the National Agency for weighing. The had the heart problem diagnosed at age four months (tetralogy of the fallot) and her health status was not good before surgery. She had black and blue fingers and legs, loss of breath, fatigue, and weakness. EMWF paid for \$822, CPI paid for \$548, and CPFC paid for \$343 dollars of the total costs for the operations, travel, medicine, and hospitalization costs of \$1,713. Surgery was performed on April 19, 2001 at a cost of \$1,850 and the patient left the hospital on May 2, 2001 in good health status. She no longer needs medicine, no longer has black and blue fingers and legs, or loss of breath. Her scar was visible.

The mother said she was very happy to receive financial support and got the best opportunity for surgery for their child and thanked the donors/sponsors for their child's surgical operation. The mother had no suggestions on how to improve the program, and only said that there needs to be more money from the donors to help more heart patients in the future.

The family had to stay in or near the hospital for two months waiting for surgery. The total cost to the family was about \$1,000 Us of their own money for food, nutrition, transportation, house rental costs over a two month period.

HH/QT Patient 2: The second patient is a four-year old who was suffering from weakness, fatigue, loss of breath prior to the surgery. The child's surgery scar was visible. The mother said "before surgery this child often had pneumonia and difficulty breathing". The mother is a 38 year old hygienic worker and the father is a tax man, with two sons, this one being their youngest who is in kindergarten. The family had to pay \$514 dollars for the procedure, and about \$1,000 for a two-month stay at the hospital. EMWF paid \$386 dollars and the family paid \$514 for the procedure for a total of 14 million VND or about \$900 dollars US. The exam was done on June 3, 2003, the family assessment on June 26, 2003, they entered the hospital on September 29, 2003, and left the hospital on October 20, 2003 and EMWF maid its payment on October 22, 2003.

The health status of the child now after surgery is very good. He no longer needs to take medicine for heart disease. One month after the surgery they had to go to the hospital for the first re-exam and the doctor said his health was good. One year later (October 2004), he will need a second follow-up exam. The mother said that EMWF had the ability to save their child. The family was very satisfied with the procedure. The mother said if they didn't have EMWF support, it would have been very difficult to pay for the surgery costs.

For the future they would like EMWF to develop a program to support many more children with heart disease, so they can also have surgery. The mother reported that the doctors did not tell them why they have to stay in the hospital so long before the surgery. The Hospital was very overcrowded and it was difficult to enter. John Ward explained that the doctors wanted to wait until teeth problems were corrected and other health conditions like colds and flu cleared-up before doing surgery. In this case they had problems with the child's tooth decay and had to remove decayed teeth have them heal which took two weeks.

Parents are required to sign a form at the hospital to approve and move ahead with surgery. The new form does not indicate where the surgery procedure was actually performed. The EMWF agreement with CPFC is that CPFC allocates \$1,000 to send children for surgery, e.g., to go to Hue or the heart Institute in HCMC.

The EMWF staff reported about some cases of deception in which the family went to a poorer household for the assessment interview (claiming it was their house) to qualify for the funds. In the early months families tended to get more money, but could have paid more of the costs themselves,

but with time EMWF got more experience in doing the assessments and allocating the funds better. The families must fill out an assessment form. EMWF now sends two social workers to the family site, with one walking around the neighborhood to find out the real situation with the family. In another case a mother reported that she didn't work, when after talking to neighbors it was clear that she worked at the post office.

EMWF/ATLANTIC supported School Projects in Quang Tri

The ATLANTIC consultant visited a couple of school construction projects with EMWF project director John Ward that partially supported by ATLANTIC funds. EMWF paid for the construction of two L-shaped three room school houses last year to fit on corner lots; and EMWF also has built some one and two room school houses in other Quang Tri communes as well. The school (for children ages 2-5) that the ATLANTIC consultant visited still needed a fence to protect the school and keep the children from running in the busy road. The People's Committee of the commune agreed to contribute 20,000,000 VND for the construction of a school kitchen and the outside fence, but they still have done this after a few months of the school operating. The school management board pays for the teachers, with the children's parents paying a tuition fee to help cover the costs.

EMWF/QT constructed four two-room kindergartens in 2003 and are building three more schools in 2004

[Note: All rural projects of EMFW in Quang Tri are covered (to some extent) by ATLANTIC funds. Another thing to note is that sometimes in Vietnam the community (not the government) pays for schools in villages.]

EMWF/ATLANTIC supported Water Projects in Quang Tri

EMWF with funds from ATLANTIC and other sources have supported and number of water systems projects in Quang Tri during the past two years. The ATLANTIC consultant visited one of these rural project sites on March 1, 2004. A new well and storage tower was being constructed. The residents seem to very much appreciate the support of EMWF and ATLANTIC for the water and school projects, although the EMWF staff did not feel that the local government authorities showed as much appreciation for the aid work as did the individual local citizens who directly benefit from this aid work. EMWF/QT is starting up another water project this year.

EMWF/QT is also planning to use some extra funds to cooperate with CPI on a rehabilitation center, with EMWF putting up the building and CPI providing funds for training/capacity building of a physical therapist and covering the equipment costs. EMWF and CPI also team up on funding and building compassion houses for needy families in Quang Tri. For example, CPI will do an initial assessment of the need for homes for landmine and UXO/bomb victims and then EMWF also does an assessment of socioeconomic need according to its own criteria (e.g., those used in the FERF and HHP projects). EMWF eligibility criteria include a woman with dependent children who lost her husband and has no economic working skills; while CPI eligibility criteria include a man who has lost his legs and has a dependent family.

[Note: EMWF Office in Quang Tri did not do any renovations or new constructions of local government commune health clinics, partly because of EMWF/QT's perception that even after doing such work the government clinics would still be very underutilized]

d. Challenges/Needs

The province is among the poorest in Vietnam, there are relatively few international NGOs working here, donor support is limited and the health infrastructure and health service needs are great. THE EMWF/QT staff pointed out that electric power outages are common, and there are water shortages from time to time as well.

Although the ATLANTIC-supported work by EMWF work in Quang Tri and neighboring provinces is very much appreciated by the direct beneficiaries, there are sometimes difficulties in getting the work finished in a timely and high quality fashion, because of difficulties with local construction contractors (poor quality work or dishonesty). For example, John Ward said that he has already gone through 11 local contractors for various aspects of construction and renovation work, but that he feels he can only confidently rely on two of these contractors to get good work results.

As the EMWF senior staff pointed out in interviews, working in Quang Tri remains difficult. Projects initiated in Quang Binh province and in a cooperative effort with the Vietnam Veteran Restoration Project (VVRP) in Thua Thien Hue province in 2003 were reportedly much easier in project implementation. Although the EMWF Quang Tri project director is not exactly sure why things are difficult in implementation in Quang Tri province, it has become necessary to not implement any new construction projects in Quang Tri until existing problem projects are completed. Some of the projects are over two years old. However, the Quang Tri Hospital Multi-purpose Building Project which was approved recently in the (unofficially) reported amount of between \$1,000,000 and \$1,200,000 USD will continue on schedule despite the difficulties and/or delays with other projects.

The EMWF Quang Tri Project Directors also reported that usually visas for NGO workers are good for only 6 months, and the requirement for frequent visa procedures is very inconvenient, time consuming, and not very helpful.

e. Leverage and Other Benefits

Quang Tri is a very poor province, and most international assistance has focussed land-mine removal and landmines victims. The donor assistance that has been coming in has been relatively small and inadequate for what is needed in the health and humanitarian sector.

For the HHP the CPFC, EMWF, the family and sometimes other NGOs (e.g., CPI) or donors will all contribute to some of the costs for surgery, hospital stays, transportation, medicines and food costs during the examination, surgery, and follow-up visits periods.

In addition to support from cardiovascular surgery and cardiology departments at the heart Institute in HCMC, Bach Mai hospital in Hanoi, and Hue Central Hospital, some additional assistance is provided for some persons with disabilities, by visiting physicians/podiatrists (e.g., Paul Wade), physical therapists (e.g., speech pathologist Larry Hammer from California to fix laryngectomy problem).

For school construction projects supported by ATLANTIC the People's Committee sometimes commits additional funds to support the construction activities, but they do not always deliver on their commitments in a timely fashion. For example, in one of the kindergartens funded by ATLANTIC that I visited, the People's Committee of the commune agreed to fund the building of a fence around the school since it was right next to a busy road, but months had gone by since the

EMWF construction of the building was completed and the children were in school, but the fence had still not been funded and installed by the People's Committee. For school constructions EMWF has a matching funds policy and also a "turn key" policy as with its other construction projects. The "turn key" project approach means that EMWF completely manages the project construction and/or renovations work is complete and then the building is turned over to the local health/hospital authorities. In the middle of the contract if changes are needed, the contractors and/or local authorities must consult with all parties, and counterparts are not allowed to change the design work without EMWF approval.

In Thua Thien Hue one 3-room primary school is now under construction (with \$9,500 USD coming from VVRP and \$8,000 USD coming from EMWF)

The ATLANTIC-supported schools also benefit for private individual international donations of boxes of educational aids and school materials provided to some of the schools. For example, for one of the ATLANTIC-supported schools constructed and NBC journalist provided the equivalent of \$4,000 dollars U.S. worth of school supplies and educational materials

EMWF/QT also is cooperating with CPI on a building and staffing a small rehabilitation center, with EMWF planning to put up the building and CPI providing funds for training/capacity building of a physical therapist and covering the equipment costs.

EMWF is cooperating in Quang Tri with a number of international NGOs and local Vietnamese organizations on several humanitarian projects, with each organization contributing funds or in-kind contributions (e.g., cooperation with other NGOs such CPI, Vietnam Veteran Restoration Project (VVRP), Plan International; World Vision International WVI; and cooperation with other organizations (LZ Russel Veterans Association; Northland Veterans Association; Office of Genetic Counseling and Disabled Children – Hue Medical College). (See detailed list of EMWF Quang Tri Office collaborative projects in Endnote #6).

f. Recommendations

Recommendations not required in this report for these supported activities. Atlantic's support for humanitarian projects of EMWF are in the form of funds for general support and overhead for EMWF without special reporting requirements, restrictions, or specific project objectives attached to the use of Atlantic funds for these humanitarian activities.

Chapter III: Program Level Assessment and Atlantic's Role

Program-wide Level Findings and Recommendations:

a. Overall Program Strategy and Impact

The ATLANTIC health sector program should balance support for constructing or renovating health facilities with the equally important need to support technical and management training of health care staff to ensure quality of care and sustainable health service delivery programs. Appropriate and functioning up-to-date medical equipment is also needed, and ATLANTIC and EMWF should work with the health facilities and other donors to ensure that comprehensive support for these different components is provided.

b. Site and Project Selection

Central Vietnam is one of the poorer regions of Vietnam and economically disadvantaged. Periodic floods and disease outbreaks (such as Dengue fever) have added serious public health problems to this region in recent years. Most international NGOs concentrate much of their work in the northern and southern regions of the countries where they also tend to have their headquarters or project offices (i.e. Hanoi and HCMC). Thus, the Central Viet Nam region is a very appropriate region for ATLANTIC and EMWF to be concentrating its health and humanitarian aid efforts, although it is good that EMWF and ATLANTIC's efforts are not exclusively in this region alone.

c. Synergies/Multipliers

In some cases the presence of ATLANTIC and EMWF has had a synergistic effect, in terms of drawing in the involvement of other international NGOs, projects and donors (e.g., CPI; VVRP; CPFC; JICA; Spanish government development agency; etc.) and in expanding the programmatic and geographic scope of the initial projects .

d. Leverage Gained

Other donors and some international NGOs have now begun contributing to the hospital improvement activities and humanitarian aid activities initiated by EMWF with ATLANTIC financial support. The amount of leverage gained in Hue does not appear to be as evident as was observed in Da Nang and Quang Tri. Because of ATLANTIC and EMWF support for renovations and new building, the Da Nang, Hue and Quang Tri hospitals have evidently been able to free up more of their hospital budgets to send medical staff for needed training in various technical and specialty areas. Some donors such as JICA and the Spanish Government have made substantial grants to cover the costs of equipping the new and renovated facilities at Da Nang City Hospital (JICA) and at Quang Tri General Hospital (Spanish Government), but no such leverage has been reported yet for Hue Central Hospital's new Pediatric Building.

e. ATLANTIC's Role: Staff Role and Interactions with Clients

The ATLANTIC relations and interactions with EMWF have been very positive and productive, while EMWF's interactions and relations with the local beneficiaries (health institutions, communities, and individual families) have also been very positive, productive and efficient in terms of cost-effectiveness. However, there have been problems with the level of cooperation with EMWF on the part of some local contractors, in the quality of the work performed by some of the local construction contractors and in the quality of some of the materials some contractors used (which required redoing some work and replacing poor quality materials at extra cost). Also, the communication between the Heart Institute and the Fondation Alain Carpentier and the Atlantic

Foundation in the funding and establishment of the Cath-Lab interventional cardiology center at the Heart Institute was done at a very high level and obtaining documentation of the process was difficult as a few years have now passed since these activities were completed.

f. Future Platforms

The new training program for all levels of health providers in Da Nang City, and support for selected commune and district level health facilities (which could serve as models) may provide a better linkage between primary health care and prevention activities in the community and secondary and tertiary hospital care facilities in Da Nang City. A comprehensive program of public health sector support can be very expensive and should be done in only one city or province (e.g., Da Nang City or Quang Nam), with only selected communes/wards and district level sites supported by ATLANTIC/EMWF to serve as models for further health management and technical training and for medical facilities improvement, and for scaling successful projects to other communes/ward and districts.

Traffic and trauma injuries, as well as congenital defects, seemed to predominate the surgery demands on the health institutions the ATLANTIC consultant visited. And as the HIV/AIDS epidemic continues to spread throughout Vietnam, it will undoubtedly increasingly affect the central provinces in the years to come. Special attention may need to be devoted to these public health issues in both terms of local capacity for prevention and care and treatment work. Thus, any comprehensive public health/health sector effort provided by ATLANTIC in one province or city or nationally should keep trauma accidents prevention and care, and HIV/AIDS prevention and care high on the ATLANTIC agenda, if an optimum long term positive public health impact is desired. Special arrangements may also need to be made for hospitals' preparedness during periods when there are floods and recurring epidemic outbreaks such as Dengue fever, which can overwhelm the hospital wards and staff human resources in the years they occur, regardless of the size of the facility, as was reflected in some of the staff interviews and in the hospital data of the past 5 to 7 years that was shown to the ATLANTIC consultant.

Chapter IV: Summary of Findings and Recommendations

A. Summary of Findings (as they relate to the Atlantic's health strategy for Vietnam)

- The establishment of a Cath-lab for interventional cardiological procedures at the Heart Institute in Ho Chi Minh City has been very successful, with many patients benefiting from the new closed-heart services and procedures now available. The Heart Institute Cath-lab Center has become a training center for cardiologists and surgeons from all over the country. It is not clear how future support for the supply of such high-technology equipment would fit into Atlantic Philanthropies Health of Populations strategy for Vietnam.
- Patients and families at Da Nang City Hospital, Hue Central Hospital new Pediatrics Department, and the renovated Trauma Suregery and pediatrics Wards of Quang Tri General Hospital were generally very satisfied with the improved facilities, had few complaints, and said the facilities were more comfortable, cleaner, and convenient in terms of space and toilets, but many wards were still crowded as patient flow continued to increase steadily each month and year since the renovations or the new constructions. There were a few continuing complaints about poor ventilation, heat, and poor drainage at Quang Tri Hospital Ward and the Pediatrics Building of Hue Central Hospital.
- Hospital staff also were usually very happy with the facility improvements, saying the new/renovated hospital facilities were much better, more comfortable, more hygienic, spacious and efficient in terms of a working environment, though some staff made some complaints about ventilation, shower drainage (in the toilet/restrooms), and a continued lack of adequate equipment (in all hospitals).
- Healthy Heart Program and FERF providing essential and life-saving financial assistance for needy children and families. Outreach, social worker and socioeconomic assessment system working well, with some attempts by some families to deceive the HHP to obtain a better financial support package. Operation Walk has also been an efficiently operated small project that has benefited many children with motor-disabilities, with many successful results in increasing the patients physical mobility through surgery and rehabilitation therapy.
- The humanitarian programs carried out by EMWF with Atlantic general fund support were also highly appreciated by the beneficiaries, and were done effectively and at relatively low cost (e.g., FERF, Operation Walk, district hospital and commune clinic renovations, water projects, kindergarten/primary school constructions, etc.)

Additional Recommendations

- With limited human and financial resources ATLANTIC and EMWF should try to maintain a geographic focus;
- Atlantic should consider providing a more comprehensive and integrated program of health sector support in selected "Model" or "Neediest" project districts and communes (that supports both prevention activities in the communities and high quality curative services at

facilities; human resource capacity-building and training at all levels in health service delivery and management; as well as improvements in the physical facilities). The support by Atlantic for capacity building and training of community health providers at the commune and district levels;

- In project provinces ATLANTIC and its implementing partners should consider expanding prevention efforts to include behavioral change communication (BCC)/mass media and peer education public health activities in key areas such as injury prevention, HIV/AIDS prevention and care; drug/alcohol abuse prevention and harm reduction; blindness prevention; and prevention of communicable diseases (to have a wider public health impact): “An ounce of prevention is worth a pound of cure”;
- More effort is needed to document project activities and disseminate Lessons Learned Reports to better inform others and for others to consider the successful projects for possible replication;
- Set realistic objectives, targets, with measurable indicators and outcomes and make evaluation plans in the project development stage;
- Identify and work more closely with other donors to coordinate project support and avoid duplication of efforts and to fill gaps in needed health sector support;
- Coordinate with other donors and the local health officials to ensure support is provided for appropriate equipment for medical facilities and that relevant training is provided to medical staff in both program management and technical areas;
- Work more closely with local Health Departments in project areas to know the long term health plans and strategies and other ongoing activities to avoid wastage and/or duplication of efforts;
- Monitor project activities and expenditures regularly and more carefully (require reports and full documentation of expenditures) (Conduct audits regularly)

Description: Comprehensive and Integrated Approach for Atlantic Philanthropies Health Sector Support in Selected Geographic Areas of Vietnam

- Build/Renovate Infrastructure/Facilities;
- Train and build human capacity (Technical Medical Skills and Management and Supervision Skills);
- Ensure Appropriate Equipment and Logistics/Supplies System (get other donor and local government support);
- Ensure the Provision of Quality Care (Counseling Skills; Infection Prevention; Access to Services; Confidentiality; Record Keeping/Management Information Systems(MIS); Public Health/Prevention; Referrals and Linkages; An Appropriate Constellation of Services; Technical Competence of Providers; Managing Client Flow/Reduce Waiting Times, Proper Supervision of Staff, etc.);
- Ensure sustainability and cost-effectiveness of health services (working with local health authorities and other donors to develop effective management and cost-recovery systems);
- Promote and link prevention and care services and link different levels of services through referrals; and increase public awareness of linkages, i.e., link hospital services with community outreach and prevention services, as well as effective referral system between commune, district, and provincial level health care facilities;
- Encourage improved and more decentralized planning and management decision-making, and the collection and use of program service data and monitoring and evaluations to improve health service program performance.

ENDNOTES:

ENDNOTE 1. Source: From communication from Olivier Liacre February 18, 2004.

Catheretization is the generic act of the "interventional cardiology", mainly used for accurate diagnosis and intervention. The goal is to prevent from stroke and heart failure due to stenosis or blockage of coronary arteries that are feeding the heart. This more recent medical technique enables medical staff to (a) investigate more deeply into coronary arteries and detect stenosis and potential blockage. The process is to inject a contrast solution into the vessels to see the trouble that has primarily been suspected through a standard outpatient examination (using electrocardiogram and cardiac echography that only give an indirect image from outside); (b) directly intervene into the arteries to restore the path of the blood by dilating the vessel, either by blowing up and remove a small balloon or implanting a stent to prevent a new stenosis. The interventional cardiology mainly concerns patients over 45/50 years old whose arteries have been damaged by age or bad hygiene of life. It is indicated to treat patients whom medical treatment cannot cure, because their disease is mechanical, while sparing them a heavy surgery. The average length of stay for catheretization is from 24 to 48 hrs. The operation requests an operating room insulated with lead (due to use of X-Ray), a "C arm" holding an x-ray tube for multidirectional scanning, a special operating table that is adjustable in length and height, monitors to follow the insight progress, and a monitoring computer system to assist and record the operation. A level medical team is required for doing angiographies and dilatations (using either the push balloon option or the implanting of a stent. Also, it is necessary to ensure provision of the option of a bypass surgery back-up in case of too severely damaged arteries. All this requires high capacity and good cooperation of cardiologists and surgeons.

In addition, as starting the program, the Heart Institute had to provide training of the local staff in France, and French experts on-site assistance. One-use materials and stents are rather costly, especially the last generation of stent that is specially treated to avoid deposit of artheroma resulting in a new stenosis (special stents cost up to \$1,000 each). The cheaper stents in the \$100-200 dollar range do not always prevent the artheroma deposits. The Heart Institute has managed to finance the material and disposables since the initial six-month supplying, from the overall operating budget of the Heart Institute and patient fees.

The procedures can be even more costly when as many as four catheters and/or two stents may be used during one procedure. This can put the procedures out of reach for poorer patients, with out significant outside financial support for the procedure. Catheters usually enter into an artery near the hip/thigh. The advantage of having the Cath-Lab facilities at the Heart Institute is many patients need only dilatation procedures, thus avoiding the need for open heart surgery. Prior to the Cath-Lab being set up in The Heart Institute these interventional cardiology "closed-heart" procedures were not an option.

ENDNOTE 2. Specific Staff and Patients/Family Interview Results from Da Nang City Hospital:

ENDNOTE 3. Specific Staff and Patients/Family Interview Results from Hue Central Hospital:

ENDNOTE 4. Specific Staff and Patients/Family Interview Results from Quang Tri General Hospital:

ENDNOTE 5. Specific Staff and Patients/Family Interview Results from the HHP and FERF Projects of EMWF (Da Nang and Quang Tri Offices of EMWF):

ENDNOTE 6. Detailed Report of ATLANTIC-supported Activities of EMWF/Quang Tri Office: 2000-4

Comprehensive list of projects implemented through EMW-QT office since January 2000 – December 2003.

QUANG TRI PROVINCE:

SPECIAL PROJECTS:

2002

Quang Tri General Hospital – Complete renovation of 3 wards, (200,000 usd).

2003

1. Teachers Dorm, Hai Chanh Commune, Hai Lang District, 8 rms w/ kits and bathrms. (36,211 usd).
2. Rice Dryers – 2 rice dryers imported and placed with co-ops in Lang Phuoc, Dong Le Ward, Dong Ha and Trieu Hoa Commune, Trieu Phong District – Value: approximately (16,000 usd). Rotary Funded.
3. EMWF Da Nang Dental Clinic, outreach program to Dong Giang (basic dental service for 600 children in one week). (Value - ?).

SUB-TOTAL \$252,211 USD

KINDERGARTENS

Dong Ha Town -

- 2000**
1. Phuong Dong Thanh, hamlet 8 - 1 room, (5,000 usd).
 2. Phuong Dong Luong, Dai Ang Village - 1 room, (5,000 usd).
 3. Phuong Dong Luong, thon Lai Phuoc - 1 room, (5,000 usd).
 4. Phuong Dong Le, thon Lang Phuoc - 1 room, (5,000 usd).
 5. Phuong 4, hamlet 1 - 1 room, (5,000 usd).
- 2001**
6. Phuong Dong Giang – 1 room, (5,000 usd).
 7. Phuong Dong Thanh – 3 rooms, (10,000 usd).
- 2003**
8. Phuong 2 – 2 rooms & kitchen, (10,767 usd) (P.2 contribution - 1,066 usd).
 9. Phuong 5 – 3 rooms, (10,767 usd) (P. 5 contribution - 1,066 usd).

Trieu Phong District -

- 2000**
10. Xa Trieu Dong, thon Nai Cuu - 1 room, (5,000 usd).
 11. Xa Trieu Trach, thon An Trach - 1 room, (5,000 usd).
 12. Xa Trieu Thuong, thon Tram - 1 room, (5,000 usd).
 13. Xa Trieu Thuong, thon Tan Xuan - 1 room, (5,000 usd).
- 2001**
14. Xa Trieu Thuan, thon Dai Loc B - 1 room, (5,000 usd).
 15. Xa Trieu Do, thon Quy Ha - 1 room, (5,000 usd).
 16. Xa Trieu Thanh, thon Tan Duc - 1 room, (5,000 usd).
 17. Xa Trieu Phuoc, thon Ha Loc - 1 room, (5,000 usd).

- 18. Xa Trieu Phuoc, thon An Loi - 1 room, (5,000 usd).
- 19. Xa Trieu Dai, thon Phu Tai - 1 room, (5,000 usd).
- 20. Xa Trieu An, thon Tuong Van Dong - 1 room, (5,000 usd).
- 2002** 21. Xa Trieu Lang, center - 3 rooms – (10,000 usd).
- 22. Xa Trieu An, thon Tuong Van Dong - 2 rooms, (5,345 usd).
- 23. Xa Trieu An, thon Hay Tay - 3 rooms, 10,000 usd)
- 24. Xa Trieu Thanh, center - 3 rooms, (10,000 usd)
- 25. Xa Trieu Hoa, center - 3 rooms, (10,000 usd).

Gio Linh District -

- 2000** 26. Xa Trung Hai, thon Cao xa - 1 room, (5,000 usd).
- 2001** 27. Xa Gio Hoa, thon Nhat Hoa - 1 room, (5,000 usd).
- 28. Xa Linh Hai, thon Hai Hoa - 1 room, (5,000 usd).
- 29. Xa Trung Hai, thon Xuan Long - 1 room, (5,000 usd).
- 30. Xa Gio Chau - 3 rooms, (10,000 usd).
- 2002** 31. Xa Hai Thai, Thon 7,2A - 2 rooms, (5,345 usd).
- 32. Xa Hai Thai, Thon Xuan Hoa - 2 rooms, (5,000 usd).
- 33. Xa Gio Binh, thon Binh Hai - 2 rooms, (5,345 usd).
- 34. Xa Gio Son, center - 3 rooms, (10,000 usd).
- 35. Xa Gio Viet, center - 3 rooms, (10,000 usd).

Hai Lang District -

- 2000** 36. Xa Hai Thanh, thon Trung Don - 1 room, (5,000 usd).
- 37. Xa Hai Que, thon Hoi Yen - 1 room, (5,000 usd).
- 38. Xa Hai Truong, thon Dong - 1 room, (5,000 usd).
- 2001** 39. Xa Hai Vinh, thon Lam Thuy - 1 room, (special-commune paid for this school as reimbursement on Lam Thuy bridge project).
- 2002** 40. Xa Hai An, center - 3 rooms, (10,000 usd).
- 41. Xa Hai Duong, thon Kim Giao - 2 rooms, (5,345 usd).
- 42. Xa Hai Khe, thon Tham Khe - 2 rooms, (5,345 usd).
- 43. Xa Hai Chanh - 3 rooms, (10,000 usd).

Cam Lo District -

- 2001** 44. Xa Cam Chinh, thon Mai Dan - 1 room, (5,000 usd).
- 45. Xa Cam Nghia, thon Phuong An - 1 room, (5,000 usd).
- 46. Xa Cam Hieu, thon Vinh An - 1 room, (5,000 usd).
- 47. Xa Cam Hieu, thon Tan Hieu - 1 room, (5,000 usd).
- 48. Xa Cam An, thon Kim Dau - 1 room, (5,000 usd).
- 2002** 49. Cam Lo Town, thon Hau Vien - 2 rooms, (5,345 usd).
- 50. Xa Cam An, thon Kim Dau - 2 rooms, (5,345 usd).

Vinh Linh District-

- 2002** 51. Ben Quan, center - 2 rooms, (5,345 usd).
- 52. Vinh Tan, center - 3 rooms, (10,000 usd).
- 53. Vinh Thuy, thon Linh Hai - 2 rooms, (5,000 usd).

SUB-TOTAL: \$329,294 USD

WATER SYSTEMS

2000

Lang Phuoc and Phu Le villages, Dong Le Ward, Dong Ha Town; extension of city water system. (12,500 usd).

2001

Van An and Lap Thach, Dong Le Ward, Dong Ha Town; extension of city water system – (16,000 usd).

2002

Xa Trieu Dai, Trieu Phong District. 4 deep wells, 4 water towers, 4 filtration and distribution systems – (63,000 usd). (still in progress).

Xa Trieu Van, Trieu Phong District. 250 family wells with filtration and storage capacity – (17,500 usd). Trieu Dai and Trieu Van projects supported by 50% Rotary and 50% EMW.

Xa Cam Chinh, Cam Lo District. 12 meter tower and distribution system – (23,000 usd – of which 5,000 usd from an individual donor).

2003

Quang Tri town, hamlet 7, ward 2 – extension of city water system (13,667 usd), (completed). Rotary Funded.

Dong Giang and D. Luong Wards, Dong Ha – extension of city water system (32,330 usd). (completed) Rotary Funded.

Hung Nhon and An Tho villages, Hai Hoa, Hai Lang; water system; pumps, 19 meter tower, filtration, chlorination, distribution system (42,000 usd including approx. 5,000 usd from EMW). (currently under construction).

SUB-TOTAL: \$224,997 USD

BRIDGES

2000

Hai Lang District, Xa Hai Vinh, renovate bridge in Lam Thuy village – (5,000 usd).

2001

Trieu Phong District, Xa Trieu Dong, thon Bich La – (14,000 usd).

2002

Chuai Ha Bridge, Xa Trieu Thuong, Trieu Phong District, – (11,000 usd) (incomplete).

SUB-TOTAL: \$30,000 USD

COMPASSION HOMES

2003

1. Cam Phu 3 village, Cam Thanh commune, Cam Lo District for Mrs. Tran thi Loan. (1,400 usd).
2. Village 5, Hai Thien Commune, Hai Lang District for Mrs. Le thi Thuy. (1,400 usd).
3. Ai Tu, Trieu Phong District for Ms. Van (1,400 usd)

SUB-TOTAL: \$2,800 USD

FAMILY EMERGENCY RELIEF FUND

2001

1. Septic Tank, indoor bathroom, and one small room for Ms. Tran Thi Luc, a double amputee. Dong Ha Town, phuong 5. Cost (498 usd).
2. Septic tank and extension of city water to home of Ms. Tran Thi Be, a double amputee. Dong Ha Town, phuong 5. Cost: (381 usd).
3. Septic tank and indoor toilet for Mr. Lang Phu Le, a double amputee. Dong Ha Town, phuong Dong Le. Cost: (525 usd).

2002

4. Club foot surgery at Quang Tri General Hospital for Duong Van Thanh - (212 usd).
5. Eye examination in Hue and purchase eye glasses - Nguyen Van Thang - (38 usd).

2003

6. 3 surgeries with Dr. Paul Wade (Duong Van Thanh, Nguyen Quang Nam, Nguyen Huu Phap), Cost: (524 usd).
7. Tran Viet Doan, medicine for leg amputation. (19 usd).
8. Nguyen Van Tri, artificial leg and therapy. (36 usd).

SUB-TOTAL: \$2,233 USD

HEALTHY HEART PROGRAM

2001

1. 41 individuals have had EMW sponsored heart examination and family assessment.
2. Of above, 28 individuals have had corrective surgery - (9,392 usd)

2002

1. 21 family assessments for heart patients.
2. 12 surgeries – (6,622 usd)

2003

1. 25 family assessments for heart patients.
2. 16 surgeries (to date).

SUB-TOTAL: USD

MISCELLANEOUS

2002

EMW brings 1st foreigner surgeon (Dr. Paul Wade) to perform surgery at Quang Tri Provincial Hospital.

2003

Surgeries for 3 FERF patients at the QT Provincial Hospital (Dr. Paul Wade in cooperation with local surgeons).

COOPERATIONS WITH OTHER NGOS

2001

ClearPath International CPI - extend city water line to home of CPI UXO client; family of Le Van Phuc, elderly couple unable to work and son is a victim maimed by unexploded ordinance, also unable to work. Phuong 5, Dong Ha Town. (Cost: 151 usd).

VVRP (Veterans Viet Nam Restoration Project) - construct one-story classroom building for vocational training center in Do Luong, Nghe An Province.

2002

VVRP (March/April) - begin 3-story classroom building for vocational center in Do Luong, Nghe An. Total contribution: (VVRP – 8,000 usd) (EMW – 8,000 usd).

VVRP (September) - upgrade kitchen, dining room, and computer room for the Quang Tri Social Care Center, provide funding for 10 compassion homes for disabled Vietnamese veterans. Total contribution: (EMW - 8,000 usd) (VVRP - 8,000 usd).

PLAN Int. / EMW-QT cooperate to help families with children who need heart surgery.

2003

ClearPath International - EMW-QT responds to request from CPI to build compassion homes for two of their clients.

VVRP / EMW-QT - complete 2-story classroom building in Do Luong, Nghe An. Total contribution: (EMW - 8,000 usd) (VVRP - 8,000 usd).

EMW-QT / World Vision – EMW-QT refers heart patients to WV from Hai Lang and Trieu Phong Districts. When WV heart funds are depleted EMW-QT will again serve patients from those areas.

EMW-QT hosts 2nd informal meeting of representatives from NGO's working in Quang Tri.

EMW facilitates relationship between the CDC, a Vietnamese NGO in Huong Hoa, and an American couple in order to realize a water project in Lang Vei that couple wished to fund.

SUB-TOTAL: \$24,151 USD

COOPERATIONS WITH OTHER ORGANIZATIONS (not NGO's)

2002

LZ Russell Veterans Association - EMW facilitates contribution for kindergarten in Hau Vien Village, Cam Lo District. (LZ Russell contribution: 2,800 usd). Build loft above bathrooms for storage of materials during flooding (150 usd).

Northland Veterans Association – EMW facilitates contribution to build two 1-room kindergartens in Xuan Hoa and Thon 7,2a of Hai Thai Commune of Gio Linh District. (NVA - 5,000 usd) (EMW - 5,000 usd).

2003

Northland Veterans Association – EMW facilitates contribution to build fences around schools in Xuan Hoa and Thon 7,2a of Hai Thai Commune of Gio

Linh District. (NVA - 1,200 usd) (EMW - 1,200 usd).

Office of Genetic Counseling and Disabled Children, Hue Medical College (OGCDC) – The OGCDC cooperates with EMW and facilitates heart patients through Hue Hospital.

- **Quang Tri - TOTAL INVESTMENT:** approximately \$867,087 USD (excluding heart patient totals)

QUANG BINH PROVINCE

KINDERGARTENS

Quang Ninh District – 2003

1. Hien Loc village, Duy Ninh Commune, 2-room, (5,736 usd).

Bo Trach District – 2003

2. Village 1B, Dong Trach Commune, 2-room, (5.736 usd).

Quang Trach District – 2003

3. Tam Da village, Quang Luu Commune, 2-room, (5,736 usd).

Le Thuy District – 2003

4. Tan Ha village, Tan Thuy Commune, 2-room, (5,775 usd).

HEALTHY HEART PROGRAM

2003

1. 25 family assessments for heart patients.
2. 11 surgeries.

- **Quang Binh – TOTAL INVESTMENT:** approximately \$22,983 USD (excluding heart patient totals)

- **GRAND TOTAL FOR BOTH QUANG TRI ND QUANG BINH**
= approximately \$890,070 USD (for 2000-2003).

End Notes (Continued)

7. Ownership: The report and other papers produced by the Consultant and his research team will belong to Atlantic, regardless of any payment or other dispute.

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- Ms. Ngo, Project Assistant
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- Olivier Liacre, Atlantic Philanthropies Management Consultant for Hue Hospital (Tel: 090-412-5038) formerly of the Alain Carpentier Foundation at the Heart Institute

Delta Construction Company:

- John Troha, Delta Construction Company (Al DeMateus) (Mobile: 090 350 2242; Tel: 054 825 898; Fax 054 828 900)

Da Nang City Health Department

- Dr. Trinh Luong Tran, MD, Director, Da Nang City Health Department (Mobile: 0903502023; Tel: 0511 824 882; Fax 0511 826 276). Also former Director of Da Nang City Hospital for four years, and Hospital Deputy Director for 10 years.
- Dr. Hoang Khanh, Head of Health Care Management in Management Division of the Da Nang City Health Department, (former Program Manager, Physician Education Program)
- Dr. Truong Bui Huu Tri, MD, MPH, Head of International Cooperation for Da Nang City Health Department, and EMWF/ATLANTIC Public Health Consultant for Capacity-Building Project

Da Nang City Hospital:

- Dr. Pham Hung Chien, Director of Da Nang City Hospital
- Dr. Ho Dac Hanh, Head of Hospital International Cooperation and Assistant to the Director
- Mr. Doan Ngoc Huu, Administrative Officer, Da Nang City Hospital
- Mr. Nguyen Kim Tuan, Hospital Administrator, Deputy Head of Admin Department
- Dr. Vo Thi Cong, Head of the Department of Pediatrics
- Mr. Pham Van Que, Staff member of the Da Nang City Hospital Morgue and Funeral Home
- Dr. Huynh Phien, Head of the Orthopedic Surgery Division

Hue Central Hospital:

- Professor Pham Nhu The, Director Hue Central Hospital
- Professor Bui Duc Phu, Vice Director, Hue Central Hospital; Chief of Thoracic Surgery and Cardiovascular Service; Chief of the Department of Surgery, Faculty of Medicine of Hue
- Dr. Tran Thi Minh Huong, Department Head, Pediatrics Department
- Dr. Dinh Quang Tuan, Vice Chief of the Pediatrics Department
- Dr. Le Minh Khoi, Treatment Pediatrician, ICU, Pediatrics Department
- Dr. Nguyen Luong Tan, Cardiac Surgeon, Hue Central Hospital
- Mr. Hoang Ngoc Son, Directorial Secretariat, Hue Central Hospital; CVC EMWF Project Office
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- Dr. Van Cong Trang, Vice Chief of the General Planning Department
- Dr. Canh Lam, Hue Central Hospital Planning Department, and CVC Project Officer
- Mr. Tran Thai Ngoc, Secretary to the CVC Project Office (ATLANTIC/EMWF Office)
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- Dr. Le Trong Hoa, Vice Director, Quang General Tri Hospital
- Dr. Le Cong Doan, Vice Director, Quang Tri General Hospital
- Dr. Pham Van Van, Head, Planning Section, Quang Tri General Hospital
- Ms. Le Thi Niem, Head Nurse, Quang Tri General Hospital
- Dr. Le Van Phu, Trauma Ward 1 (first floor)
- Ms. Tran Tri Huu Hien, Nurse, Trauma Ward 1
- Dr. Nguyen Van Binh, Head of Trauma Ward 2
- Ward Custodian (name kept anonymous)
- Dr. Bui Thi Ngoc Oanh, Deputy Director of the Pediatrics Ward
- Ms. Nguyen Thi Dan, Nurse, Pediatrics Ward, Quang Tri General Hospital

Kids First Vietnam

- Roger Ferrell, President

Multiple Interviews with Hospital Department Heads, Staff, Patients/Clients/Family Members

Evaluation Questions Guide (sample questions):

- a. **What was done under this project? Specific activities? Why? What were the project objectives?**
- b. **How many clients received these services each month before construction/renovation? How many monthly clients after construction/renovation? How can they improve service utilization, and quality of care (QoC)?**
- c. **Have other donors become involved? If so, who? Any more INGOs become involved? If so who? Have local government or local private agencies contributed in cash or kind?**
- d. **Have new projects or activities developed as a result?**
- e. **Has this activity been replicated or scaled-up elsewhere?**
- f. **Were there any delays? Is task complete? If not, why not?**
- g. **What problems were encountered in implementing this project? How were they resolved? Which problems persist?**
- h. **Were Activities properly monitored? Properly Supervised?**
- i. **What future needs and plans do you have for this facility? How much do you plan to increase your client flow?**
- j. **What have been the main lessons learned in this project? What worked well and why? What didn't work well and why not? What can be done to improve the situation in the future.**
- k. **Were financial support resources adequate?**
- l. **Were technical support resources adequate?**
- m. **What are your future plans and needs?**

FACILITY-SPECIFIC QUESTIONS TO PATIENTS/FAMILIES AND STAFF

- n. **(To patients/clients/family members and to health staff) How do you like the current facilities and services provided here? What do you like about the facilities? Have these facilities improved (if possible, compare to before)? How do the facilities and services now (after renovations or new construction of building) compare the facilities and services before.**
- o. **(To patients/clients/family members only) Why did they choose to come to this facility?**
- p. **(To patients/clients/families and staff) What is still lacking or not working properly (be specific)? What could be further improved to make services and facilities better?**

Figure 1: Total Number of Inpatients At Da Nang, Hue and Quang Tri Hospitals:

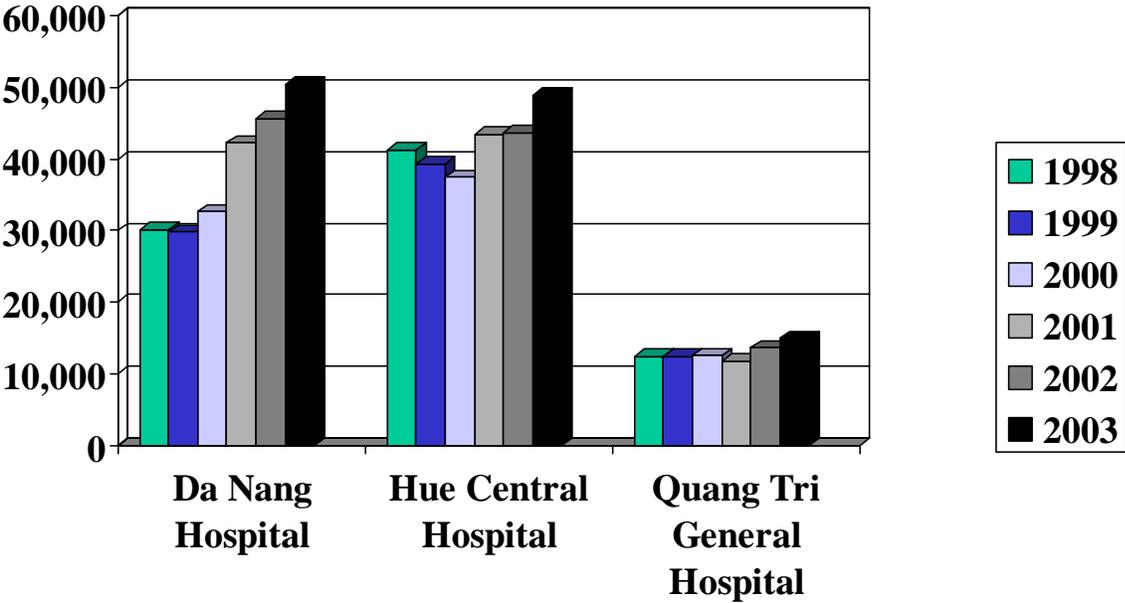


Figure 2. Number of Pediatric Inpatients at Da Nang, Hue and Quang Tri Hospitals:

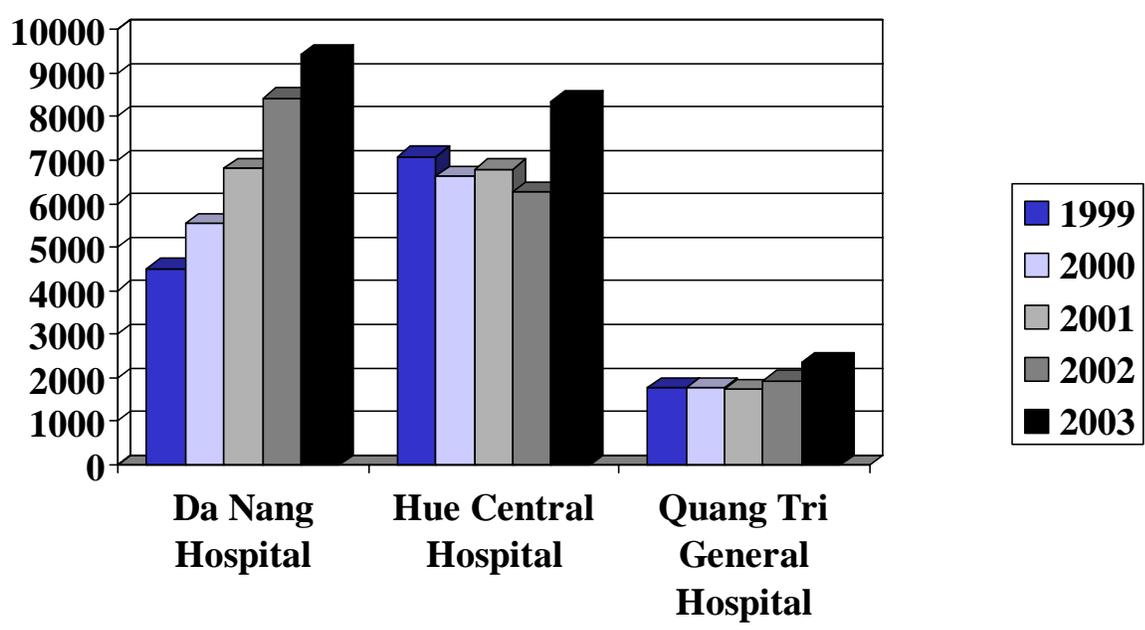


Figure 3. Number of Cardiovascular Inpatients at Da Nang and Hue Hospitals:

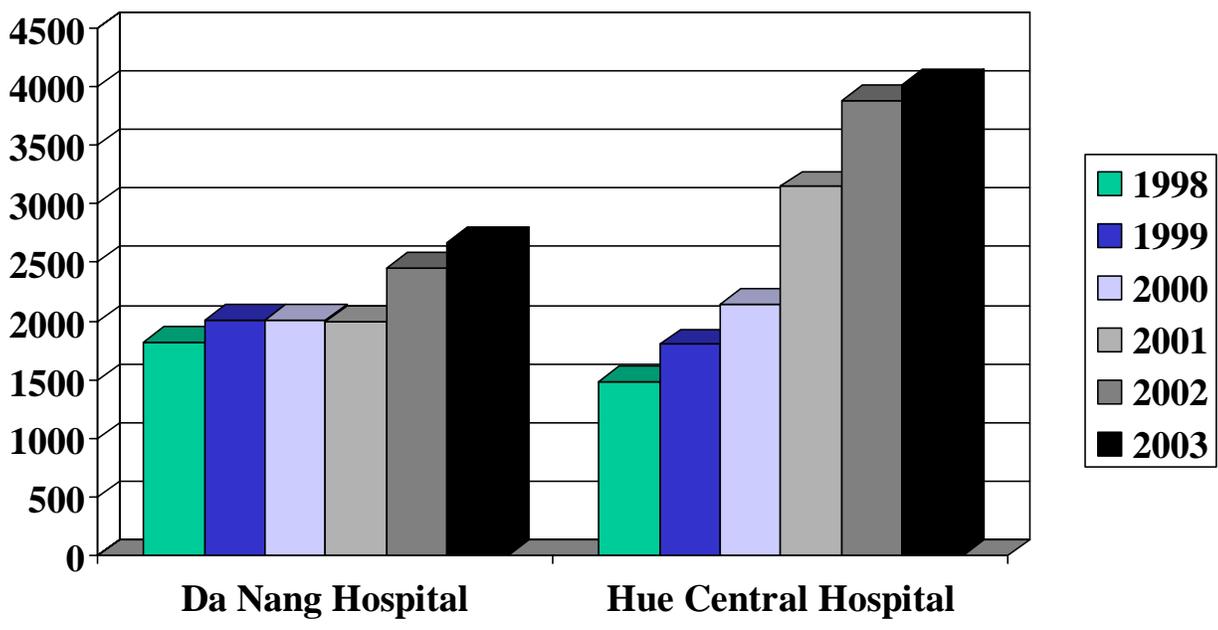


Figure 4. Number of Ob-Gyn Inpatients, Deliveries, and Burn Center Inpatients at

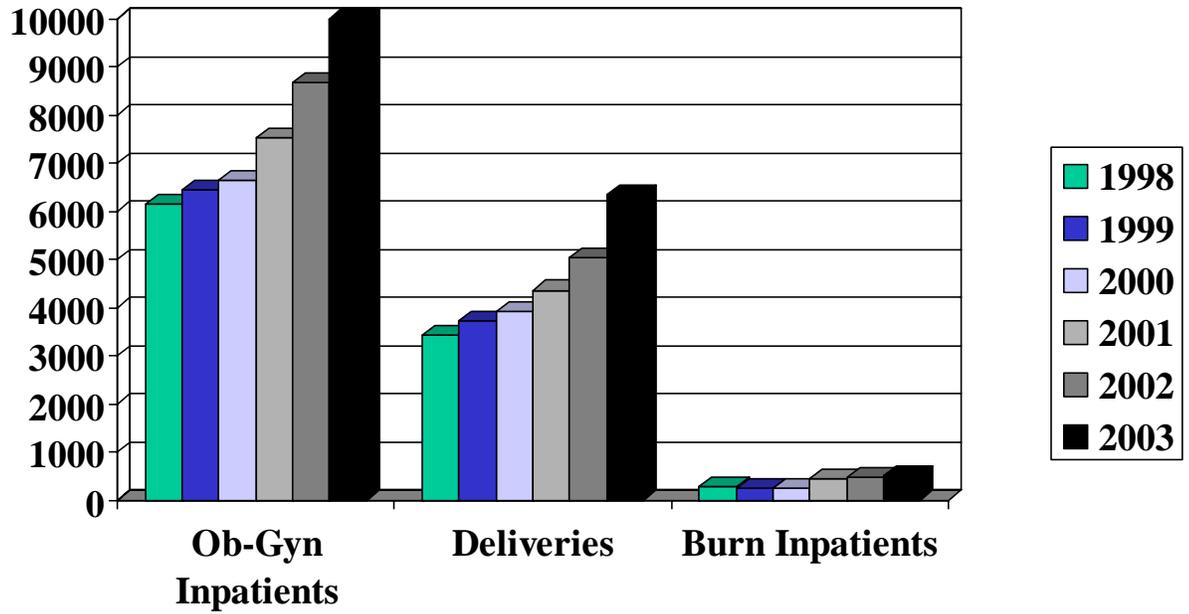
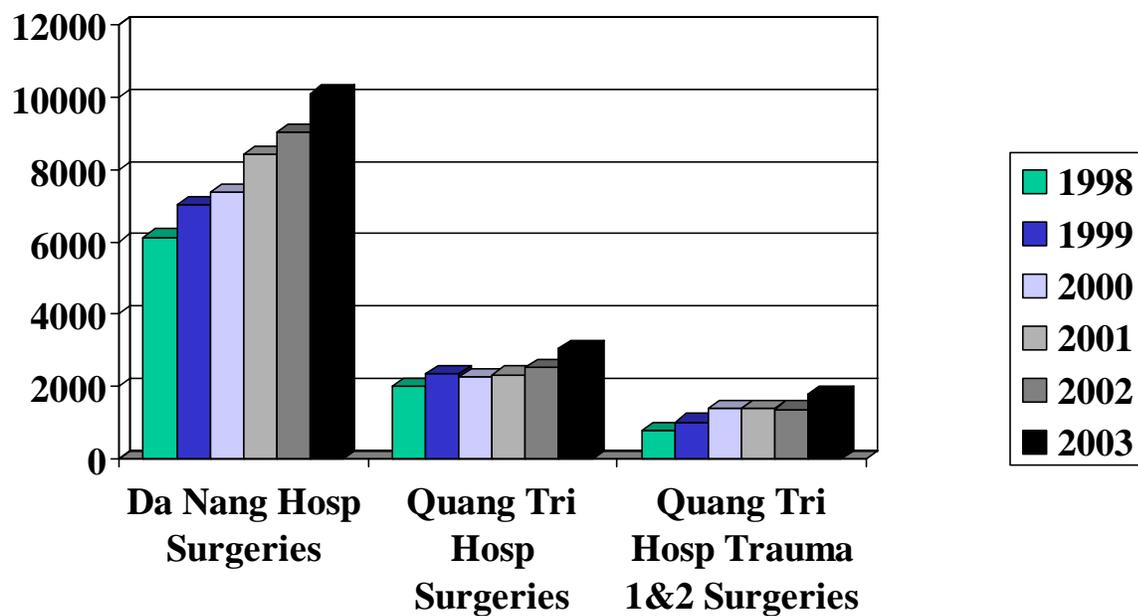


Figure 5. Number of Surgeries at Da Nang City Hospital and Quang Tri Hospital:



**Table 1. East Meets West Humanitarian Projects Funded by
The Atlantic Philanthropies: Budgets and Number of Beneficiaries
for the Period 1999- February 2004**

| PROJECTS/ PROGRAMS | TOTAL | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | | 2004 |
|--|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|------------------|
| | | Amount paid | beneficiaries (people) | |
| TOTAL SPENT | \$ 3,686,249.74 | 487,251.26 | 50705 | 665,399.42 | 56640 | 853,981.30 | 65960 | 622,183.66 | 35245 | 985,336.20 | 57667 | 72,097.90 |
| A MEDICAL SUPPORT | 737,664.72 | 237,990.27 | 25000 | 172,086.20 | 3686 | 65,864.94 | 13348 | 40,188.49 | 406 | 201,037.69 | 33284 | 20,497.13 |
| CLINICS & HOSPITALS | | | | | | | | | | | | |
| 1 Duy Xuyen Obstetric & Surgical | 164,404.00 | | | | | | | 554.00 | | 157,237.00 | 21805 | 6,613.00 |
| 2 Hoa Phat Clinic | 14,145.00 | | | | | 2,986.00 | 8583 | 9,559.00 | | 1,600.00 | | |
| 3 Duc Pho Health station | 10,000.00 | | | | | | | | | | 11000 | 10,000.00 |
| 4 Danang hospital-Pediatric, Burn & Library | 300,925.67 | 234,736.27 | 15000 | 65,915.40 | | 274.00 | | | | | | |
| 5 Danang Obstetric & Surgical departments | 17,583.00 | | 10000 | 8,370.00 | | 9,213.00 | | | | | | |
| 6 Hue hospital/ A monitor | 20,034.24 | | | | | 20,034.24 | 300 | | | | | |
| 7 Hue hospital /Ultrasound & room renovate | 61,645.66 | | | 61,645.66 | 750 | | | | | | | |
| 8 Danang hospital/Ultrasound fixed & rm renovate | 7,019.30 | 3,254.00 | | 3,765.30 | | | | | | | | |
| 9 Quang Tri hospital- an Ultrasound | 11,500.00 | | | | | | | | | 11,500.00 | | |
| 10 Brain surgery instruments for DN hospital | 10,644.00 | | | | | | | 10,644.00 | 250 | | | |
| | - | | | | | | | | | | | |
| OTHER MEDICAL ASSISTANCE | - | | | | | | | | | | | |
| 10 Dental program | 15,000.00 | | | 11,575.52 | 2670 | 3,424.48 | 4067 | | | | | |
| 11 FERF | 35,430.83 | | | 6,452.29 | 156 | 8,620.10 | 179 | 2,431.49 | 156 | 15,943.43 | 290 | 1,983.52 |
| 12 Heart Surgeries | 35,333.02 | | | 14,362.03 | 110 | 4,313.12 | 139 | | | 14,757.26 | 189 | 1,900.61 |
| 13 Podiatric Surgery program | 34,000.00 | | | | | 17,000.00 | 80 | 17,000.00 | | | | |
| | - | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|----------|---|---------------------|------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|-------------|------------------|
| B | HOUSES | 425,096.83 | 36,093.46 | 125 | 85,586.37 | 175 | 101,976.00 | 455 | 53,329.00 | 0 | 144,398.00 | 380 | 3,714.00 |
| 1 | Compassion homes : 11 new houses & 4 renovations | 12,455.34 | | | 568.34 | | | | | | 8,173.00 | 60 | 3,714.00 |
| 2 | Computer set to Danang Foreign Affairs | 688.00 | | | 688.00 | | | | | | | | |
| 3 | Danang resettlement: 174 houses for relocation | 369,062.73 | | | 78,007.73 | 175 | 101,501.00 | 455 | 53,329.00 | | 136,225.00 | 320 | |
| 4 | Ethnic Minority Relocation: 25 houses, schools & other facilities | 42,890.76 | 36,093.46 | 125 | 6,322.30 | | 475.00 | | | | | | |
| | | - | | | | | | | | | | | |
| C | SCHOOLS | 1,082,612.51 | 65,556.91 | 2080 | 236,315.60 | 6712 | 246,333.00 | 4549 | 182,171.00 | 3480 | 315,852.00 | 6625 | 36,384.00 |
| 1 | Thang Binh Kindergartens/ 20 rooms (year 1999) | 47,249.24 | 47,249.24 | 1600 | | | | | | | | | |
| 2 | Tien Phuoc Elementary/ 6 rooms (year 1999) | 18,307.67 | 18,307.67 | 480 | | | | | | | | | |
| 3 | 3-D building for Disadvantage children | 100,705.30 | | | 70,953.30 | 3500 | 29,752.00 | | | | | | |
| 4 | Art Center of Love | 28,436.00 | | | 22,798.00 | 60 | 5,638.00 | | | | | | |
| 5 | Schools (year 2000-2003): 94 schools/ 340 rooms | 887,914.30 | | | 142,564.30 | 3152 | 210,943.00 | 4549 | 182,171.00 | 3480 | 315,852.00 | 6625 | 36,384.00 |
| | | - | | | | | | | | | | | |
| D | WATER AND IRRIGATION SYSTEMS | 349,125.46 | 89,194.48 | 11410 | 25,594.98 | 5092 | 54,012.00 | 20965 | 75,876.00 | 7685 | 98,504.00 | 8083 | 5,944.00 |
| 1 | Hoa Chau Water (year 1999) | 38,005.59 | 32,926.59 | 2300 | 5,079.00 | | | | | | | | |
| 2 | Water Systems: 24 water systems (years 2001-2003) | 172,570.00 | | | | | 32,803.00 | 9500 | 67,516.00 | 7385 | 66,307.00 | 6083 | 5,944.00 |
| 3 | Irrigation: 14 systems | 138,549.87 | 56,267.89 | 9110 | 20,515.98 | 5092 | 21,209.00 | 11465 | 8,360.00 | 300 | 32,197.00 | 2000 | |
| | | - | | | | | | | | | | | |
| E | ELECTRIFICATION, BRIDGE AND ROAD | - | | 0 | | 35600 | | 22104 | | 10000 | | 1500 | |
| 1 | Construction 9 bridges, 4 electrification systems, 1 road | 246,328.29 | | | 61,056.29 | 35600 | 128,776.00 | 22104 | 30,049.00 | 10000 | 26,447.00 | 1500 | |
| | | | | | | | | | | | | | |
| F | DISADVANTAGE & ORPHANAGE CENTERS | 75,510.14 | 29,213.49 | 90 | 32,869.65 | 0 | 7,273.00 | 17 | 3,834.00 | 73 | 2,320.00 | | - |
| 1 | Tien Phuoc Disables Children | 70,381.14 | 29,213.49 | 90 | 32,869.65 | | 3,628.00 | | 2,350.00 | 41 | 2,320.00 | | |
| 2 | Tien Phuoc Orphanage | 5,129.00 | | | | | 3,645.00 | 17 | 1,484.00 | 32 | | | |
| | | - | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|----------|---|-------------------|------------------|--------------|------------------|-------------|-------------------|-------------|-------------------|----------------------------------|-------------------|-------------|-----------------|
| G | INCOME GENERATION | 95,800.00 | 9,907.41 | 12000 | 5,092.59 | 0 | 25,000.00 | 0 | 50,000.00 | 16000 | 5,800.00 | 152 | - |
| 1 | Financial assistance | 800.00 | | | | | | | | | 800.00 | 22 | |
| 2 | Micro loans | 5,000.00 | | | | | | | | | 5,000.00 | 130 | |
| 3 | Pig Breeding | 15,000.00 | 9,907.41 | 12000 | 5,092.59 | | | | | | | | |
| 4 | Vietnam Plus (Theatre-based health education) | 75,000.00 | | | | | 25,000.00 | | 50,000.00 | 16000 | | | |
| | | - | | | | | | | | | | | |
| H | QUANG TRI & QUANG BINH PROJECTS | 595,605.00 | | | 21,200.00 | 5375 | 224,500.00 | 4539 | 170,250.00 | 13674 | 179,655.00 | 7795 | |
| | year 2000: 13 schools, school supplies, water projects, bridge renovation | | | | | 5375 | | 4539 | | 13674 | | 7795 | |
| | Year 2001: 19 schools/ 22 rooms; water systems, brige, medical assistance to poor people | | | | | | | | | | | | |
| | Year 2002: 19 schools/28 rooms; 4 water systems and other 250 family wells; bridge; a vocational center; medical support to 33 patients | | | | | | | | | | | | |
| | Year 2003: 7 schools/22 rooms; 3 water systems; 3 homes; a 3-storey vocational center; medial treatment support to 44 patients | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| I | OPERATION EXPENSES | 33,863.32 | 72.45 | | 177.06 | | 246.36 | | 16,486.17 | | 11,322.51 | | 5,558.77 |
| 1 | Bank charge | 5,786.31 | 72.45 | | 177.06 | | 246.36 | | 232.17 | | 458.51 | | 4,599.76 |
| 2 | EMWF- VN Office- overhead expenses | 23,887.01 | | | | | | | 16,254.00 | | 6,674.00 | | 959.01 |
| 3 | EMWF- VN- Thai Nguyen office | 4,190.00 | | | | | | | | | 4,190.00 | | |
| | | - | | | | | | | | | | | |
| | | - | | | | | | | | | | | |
| K | John Joyce- DN Universisty/ RIC | 44,643.47 | 19,222.79 | | 25,420.68 | | | | | | | | |

**TABLE 1. EAST MEETS WEST HUMANITARIAN PROJECTS
FUNDED BY THE ATLANTIC PHILANTHROPIES
FOR THE PERIOD 1999- FEBRUARY 2004**

| | PROJECTS/ PROGRAMS | TOTAL | BENEFICIARIES |
|----------|---|---------------------|-----------------------|
| | TOTAL SPENT | 3,686,249.74 | 283459 people |
| A | MEDICAL SUPPORT | 737,664.72 | 76724 patients |
| | CLINICS & HOSPITALS | | |
| 1 | Duy Xuyen Obstetric & Surgical | 164,404.00 | 21805 patients |
| 2 | Hoa Phat Clinic | 14,145.00 | 8583 patients |
| 3 | Duc Pho Health station | 10,000.00 | 11000 patients |
| 4 | Danang hospital-Pediatric, Burn & Library | 300,925.67 | 15000 patients |
| 5 | Danang Obstetric & Surgical departments | 17,583.00 | 10000 patients |
| 6 | Hue hospital/ A monitor | 20,034.24 | 300 patients |
| 7 | Hue hospital / an Ultrasound & room renovation | 61,645.66 | 750 patients |
| 8 | Danang hospital- Ultrasound fixed & room renovation | 7,019.30 | 700 patients |
| 9 | Quang Tri hospital- an Ultrasound | 11,500.00 | 300 patients |
| 10 | Brain surgery instruments for DN hospital | 10,644.00 | 250 patients |
| | | - | |
| | OTHER MEDICAL ASSISTANCE | - | |
| 10 | Dental program | 15,000.00 | 6737 patients |
| 11 | FERF | 35,430.83 | 781 patients |
| 12 | Heart Surgeries | 35,333.02 | 438 patients |
| 13 | Podiatric Surgery program | 34,000.00 | 80 patients |
| | | | |
| B | HOUSES | 425,096.83 | 1135 people |
| 1 | Compassion homes : 11 new houses & 4 renovations | 12,455.34 | 60 people |
| 2 | Computer set to Danang Foreign Affairs | 688.00 | |
| 3 | Danang resettlement: 174 houses for relocation | 369,062.73 | 950 people |
| 4 | Ethnic Minority Relocation: 25 houses, schools & other facilities | 42,890.76 | 125 people |
| | | - | |
| C | SCHOOLS | 1,082,612.51 | 23446 students |
| 1 | Thang Binh Kindergartens/ 20 rooms (year 1999) | 47,249.24 | 1600 students |
| 2 | Tien Phuoc Elementary/ 6 rooms (year 1999) | 18,307.67 | 480 students |
| 3 | 3-D building for Disadvantage children | 100,705.30 | 3500 students |
| 4 | Art Center of Love | 28,436.00 | 60 students |
| 5 | Schools (year 2000-2003): 94 schools/ 340 rooms | 887,914.30 | 17806 students |
| | | - | |
| D | WATER AND IRRIGATION SYSTEMS | 349,125.46 | 53235 people |
| 1 | Hoa Chau Water (year 1999) | 38,005.59 | 2300 people |
| 2 | Water Systems: 24 water systems (years 2001-2003) | 172,570.00 | 22968 people |
| 3 | Irrigation: 14 systems | 138,549.87 | 27967 people |

| | | | |
|----------|---|-------------------|---------------------|
| | | - | |
| E | ELECTRIFICATION, BRIDGE AND ROAD | - | |
| 1 | Construction 9 bridges, 4 electrification systems, 1 road | 246,328.29 | 69204 people |
| | | - | |
| F | SPONSORSHIP | 75,510.14 | 180 children |
| 2 | Tien Phuoc Disables Children | 70,381.14 | 131 children |
| 3 | Tien Phuoc Orphanage | 5,129.00 | 49 children |
| | | - | |
| G | INCOME GENERATION | 95,800.00 | 28152 people |
| 1 | Financial assistance | 800.00 | 22 people |
| 2 | Micro loans | 5,000.00 | 130 people |
| 3 | Pig Breeding | 15,000.00 | 12000 people |
| 4 | Vietnam Plus | 75,000.00 | 16000 people |
| | | - | |
| H | QUANG TRI & QUANG BINH PROJECTS | 595,605.00 | 31383 people |
| | year 2000: 13 schools, school supplies, water projects, bridge renovation | | |
| | Year 2001: 19 schools/ 22 rooms; water systems, brige, medical assistance to poor people | | |
| | Year 2002: 19 schools/28 rooms; 4 water systems and other 250 family wells; bridge; a vocational center; medical support to 33 patients | | |
| | Year 2003: 7 schools/22 rooms; 3 water systems; 3 homes; a 3-storey vocational center; medial treatment support to 44 patients | | |
| | | | |
| I | OPERATION EXPENSES | 33,863.32 | |
| 1 | Bank charge | 5,786.31 | |
| 2 | EMWF- VN Office- overhead expenses | 23,887.01 | |
| 3 | EMWF- VN- Thai Nguyen office | 4,190.00 | |
| | | - | |
| K | DN University | - | |
| 1 | John Joyce- DN University/ RIC | 44,643.47 | |

**Atlantic Philanthropies EMWF Hospital Construction and Renovations Photos here
(Selected Projects only)**

**Atlantic Philanthropies supported Humanitarian Projects Photos here
(Selected Projects only)**