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AIR TRANSPORT IN HUMANITARIAN MISSIONS

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ANNEX 1

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1. Executive Summary

The number of humanitarian missions has increased in recent years and research into the present political scene goes some way towards explaining this quantitative change. Attitudes to multilateralism and to aid in post-conflict environments have shifted profoundly in the wake of 9/11.

However it is measured, humanitarian aid has been growing in volume and funds made available for humanitarian assistance have more than doubled between 1990 and 2000. The growing trend in the number of humanitarian missions around the world is reflected in the air transport services. Increasingly, many organisations in this sector are demanding air charters.

Air transport is crucial to humanitarian missions, promising a fast response and the capacity for contacting remote areas lacking other means of communication. Organisations investing in air charter services for humanitarian missions include the UN and many Non-Governmental Organizations (NGOs). This work focuses on the UN as the leading contractor. The air-transport services purchased every year by the UN from external air operators increased more than 6 times between 1998 and 2002.

Special attention is drawn to the peculiar nature of humanitarian and peacekeeping missions which require dedicated aircraft and direct involvement by the operators as far as the relative safety issues are concerned. It is estimated that humanitarian flights are 200 times more exposed to the risk of accident than all other civil aviation operations.

Safety is a key issue and the last two years (2002-03) have seen a stronger UN commitment in terms of aviation safety. Unfortunately, the need for more safety and its related higher operating costs clash
with tight UN budget constraints. This happens in a very competitive market dominated by Third World and Eastern European operators.

Within this scenario of a growing but competitive market, it is possible to present a case study and to develop a business plan for starting up an air operation dedicated to humanitarian missions.

Sudan is the operational scenario targeted for the start-up. The UN, together with many NGOs, has been operating in Sudan for a considerable time now. The recent ceasefire signed between the Government of Sudan (Islamic and ruling the northern part of the country) and the Christian/Animist southern part of the country, is paving the way for a big UN peacekeeping operation. Of course, the presence of rich oilfields in the area is an added incentive to such an operation. In fact, the southern part of Sudan is very rich in oil deposits and oil companies will be very active in extracting and exploring new reserves in this area as soon as the UN has rendered the area safe.

The UN estimates the need for at least 40 aircraft in Sudan for the period 2004-2005, in addition to the already existing fleet which operates under the auspices of Operation Lifeline Sudan (OLS).

Having identified the CASA 212 as one of the best aircraft to support the UN operations in Sudan, a simple case study and business plan suggest the possibility for a new operator to access this niche market with a reasonable economic margin and with good expectations for future developments.
2. Objectives

The aim of this project is to investigate the international requirements for air transport in humanitarian missions and to analyse the characteristics of this particular operation, in order to develop the proper start-up of an airline dedicated to relief flights and air transport in remote areas, with a special focus on United Nations’ operations.

The author’s thesis is that the international community is facing the need to increase its commitment in humanitarian missions and post-conflict aids and also to develop current levels of international assistance. The present geo-political scenario, together with the increased need for safety in this particular type of operation, suggest the opening of a niche market for air transport dedicated to humanitarian missions.

The approach used to develop this project is as follows:
- Identification of the organisations involved in humanitarian missions and areas of operation.
- Short economic analysis of the organisations involved in humanitarian missions.
- Short analysis of the present geo-political situation and its possible developments.
- Identification of the characteristics of air transport in humanitarian missions from an operational point of view.
- Identification of some safety and economic issues related to air transport in humanitarian missions.

Having analysed the above issues, the objective is to present a case study and to develop a business plan for starting up an air operation dedicated to humanitarian missions.
3. Organisations involved in Humanitarian Missions

3.1 The United Nations (UN)

The United Nations is of course the lead international organisation involved in humanitarian missions. The operational agencies within the UN deliver massive amounts of aids daily and the transportation by air of such assistance is a necessity.

The UN is continuously contracting civil air operators in order to fulfil its requirements.

The UN expenditure in air transport services purchased from external air operators was about US$ 250 million during 2003 and has increased this expenditure more than six times during the last four years, as detailed in following Economic analysis tables.

UN operational bases change during the supply period in the light of varying humanitarian requirements.

The number of the operated aircraft varies hugely as a function of the operations themselves. The international scenario is ruling the demand for air operations, and the UN can face the need to simultaneously deploy one hundred and more aircraft. An operation like the one that is due in Sudan by the UN during 2004 will require more than 40 aircraft.

The UN is a unique international organisation of 191 sovereign states, representing virtually every country in the world. It was founded after the Second World War to maintain international peace and security, develop friendly relations among nations and promote social progress, better living standards and human rights. The Member States are bound together by the principles of the UN Charter, an international treaty that spells out their rights and duties as members of the world community.
In September 2000, some 150 presidents, prime ministers and other world leaders met at the UN headquarters to lay out a vision for the future. The resulting “Millennium Declaration” applies the purposes and principles of the UN Charter to a new world. To realise that vision, Member States have agreed on specific, obtainable targets aimed at overcoming hunger and poverty, ending conflict, meeting the needs of Africa, promoting democracy and the rule of law and protecting our environment – and to meet those goals within a specified time-frame.

The actual output of these declarations and agreements is always well below the intention of the statement itself. Nevertheless the Millennium Declaration is a clear indication of an increased commitment of all Member States in the delivering of aids to third world countries.

3.1.1 UN Operational Agencies

When disaster strikes, the UN operational agencies swiftly move in to help the affected population. Every day, UN emergency teams, working closely with humanitarian Non-Governmental Organisations (NGOs), rush supplies to millions of victims of man and nature, whether from war and political strife, or floods, droughts and crop failures.

The UN operational agencies involved in the air transport of aids are:

- World Food Programme (WFP) which delivers food aid.
- UN High Commissioner for Refugees (UNHCR) which delivers shelter and protection to refugees.
- UN Children’s Fund (UNICEF), which delivers relief aid to mothers and children.
- World Health Organisation (WHO) which deals with the control of epidemics such as Ebola fever.
• Food and Agriculture Organisation (FAO) with a mandate to raise levels of nutrition and standards of living, to improve agricultural productivity, and to better the condition of rural populations.

• The UN Office for the Co-ordination of Humanitarian Affairs (OCHA), headed by the Emergency Relief Co-ordinator, coordinates all UN emergency relief.

An Inter-Agency Standing Committee brings together UN humanitarian agencies and the major world relief organisations for a coordinated global response.

3.1.2 Peacekeeping

The Department of Peacekeeping Operations (DPKO) is another UN agency involved in the contracting of air operators for its peacekeeping missions.

Peacekeeping missions include: monitoring a cease-fire, establishing a buffer zone, protecting the delivery of humanitarian aid, assisting with the demobilisation of former fighters and their return to normal life, setting up mine-clearance programmes, the supervision of elections and monitoring respect for human rights. UN missions have also been asked to assume temporary administration of certain territories, as in East Timor during the period leading up to its independence in 2002.

Peacekeeping operations are claiming an increasing proportion of the international investment in addressing conflicts. In 1991, for instance, budgets for peacekeeping operations stood at $0.4 billion, and for humanitarian assistance they were $4.5bn. In 2000, budgets for peacekeeping were $2.5bn, and for humanitarian assistance $5.9bn.

During peacekeeping operations, the DPKO contracts civil air-operators for the transport of goods, UN personnel, cars and any other item deemed necessary for the operations.

The present political scenario suggests increased involvement of the DPKO in air operations worldwide.
3.1.3 UN Areas of Operation

The following is a list of current areas of UN operations:

Afghanistan
Angola
Caucasus (Armenia, Azerbaijan, Georgia)
Central African Republic
Colombia
Congo
Cyprus
DPR Korea
East Timor
Eritrea-Ethiopia
Great Lakes (Burundi, DR Congo, Kenya, Rwanda, Tanzania, Uganda)
Haiti
Horn of Africa Drought
Indonesia
Iraq
Occupied Palestinian territory
Russian Fed.-Chechnya
Sierra Leone
Somalia
Southern Africa Humanitarian Crisis
Sri Lanka
Sudan
Tajikistan
West Africa

Of course the International scenario is continuously changing both from a political and a natural calamity point of view, and the UN involvement includes areas of conflict, famine, refugees, drought and natural disasters.
3.2 Other Governmental Organisations involved in Humanitarian missions

3.2.1 USAID (USA agency for Humanitarian Mission)

The United States gives more to those in crisis than any other country in the world. USAID is the US government agency responsible for directing these contributions to thousands of non-profit partners and international organisations like the World Food Programme and UNICEF. In tandem with these organisations, the Agency helps those affected by disaster to cope and then begin again by converting crisis situations into opportunities to promote peace, democracy, and economic growth. USAID ensures that all of this assistance is spent in the way which most effectively helps those who are in need.

USAID's history goes back to the Marshall Plan reconstruction of Europe after World War Two and the Truman administration's Four Point Program. In 1961, President John F. Kennedy signed the Foreign Assistance Act into law and created USAID by executive order. Since that time, USAID has been the principal US agency to extend assistance to countries recovering from disaster, trying to escape poverty, and engaging in democratic reforms. It is an independent federal government agency that receives overall foreign policy guidance from the Secretary of State.

With its headquarters in Washington DC, USAID's strength lies in its field offices around the world. It works in close partnership with private voluntary organisations, indigenous organisations, universities, American businesses, international agencies, other governments and other US government agencies. USAID has working relationships with more than 3,500 American companies and over 300 US-based private voluntary organisations.

USAID moves massive amounts of aid by air, even if the civil operators used are mainly US companies.
3.2.2 International Committee of the Red Cross (ICRC)

The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organisation whose exclusively humanitarian mission is to protect the lives and dignity of victims of war and internal violence and to provide them with assistance. It directs and coordinates the international relief activities conducted by the Movement in situations of conflict. It also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. Established in 1863, the ICRC is at the origin of the International Red Cross and Red Crescent Movement.

ICRC regularly issues calls for tender for air operators in its many spheres of interest.

3.2.3 European Commission Humanitarian Aid Office (ECHO)

The European Union’s (EU) agency for humanitarian aid is known as ECHO (European Commission Humanitarian Aid Office). The flight services required by ECHO involve domestic and international air-transport services to be performed in connection with the humanitarian relief and rehabilitation activities supported by the EU. The Humanitarian Aid Office has funded the operation of an integrated and coordinated air-transport service in support of the humanitarian and development efforts in East Africa (including the Horn) and the Democratic Republic of Congo. ECHO Flight is a vital partner to most humanitarian agencies operating in the region, transporting personnel and supplies to remote locations that would otherwise be cut off from the outside world. Calls for tender for air operators are issued regularly.
3.2.4 Other governmental organisations

Many developed countries have their own governmental organisations for the delivery humanitarian aid but their work lies outside the scope of this project.
3.3 Non-governmental organisations (NGOs)

The list of international NGOs involved in the delivery of humanitarian aid is incredibly long. For the purpose of this study, only a few of the most important organisations are listed. The procedure I have applied when selecting NGOs is to list those which directly contract air operators for the delivery of humanitarian aid.

3.3.1 CARE

CARE International is one of the world’s largest independent global relief and development organisations. Non-political and non-sectarian, it operates in over 65 countries in Asia, Africa, Latin America, the Middle East and Eastern Europe.

With its secretariat in Belgium, CARE International's 11 offices in Europe, Australia, North America and Japan support projects that benefit almost 30 million people every year. CARE also provides emergency food and shelter to survivors of natural disasters, wars and conflicts. It remains with communities long after initial relief efforts have ceased and supports initiatives which enable people to rebuild their lives and to face the future with renewed confidence.

Each of the CARE International offices is an independent non-profit organisation, contributing to and helping manage over 500 programmes around the world.

CARE International's mission is to serve individuals and families in the poorest communities in the world. It is very active in delivering airborne relief aid during emergencies.

Many governments and institutions including the UN, the World Bank, the EU and the British government, support CARE International's programmes across the globe.
3.3.2 CARITAS

Caritas International is a confederation of 162 Catholic relief, development and social-service organisations working to build a better world, especially for the poor and oppressed, in over 200 countries and territories. Caritas’s mandate includes integral development and emergency relief where civil air operators are contracted.

3.3.3 CATHOLIC RELIEF SERVICES

Catholic Relief Services was founded in 1943 by the Catholic Bishops of the United States to assist the poor and disadvantaged outside the country. It is administered by a Board of Bishops selected by the National Council of Catholic Bishops and is staffed by men and women committed to the Catholic Church's apostolate of helping those in need. Catholic Relief Services reaches out to people in more than 90 countries and territories around the world to alleviate poverty and suffering by delivering humanitarian aid and assistance.

3.3.4 MEDAIR

Medair provides relief and rehabilitation in favour of the most vulnerable, mostly women, children and the sick, in countries affected by war or natural disaster. It is specialised in managing emergency projects in underprivileged, developing countries where crisis situations threaten to further undermine future development and stability. At the top of its priority list are the forgotten crises, often in areas which are remote and difficult to access. Therefore Medair will often be the first and sometimes only NGO to enter such areas, especially if the latter are not in the media’s spotlight. Medair may also be the last to leave, choosing to remain after media attention has moved on, the collapse of the infrastructure still a real
threat and outside relief essential. Of course, medical and nutritional programmes are usually the first to be implemented. However, Medair also carries out the distribution of seeds and agricultural implements, domestic equipment, clothes and blankets, not to mention sanitation, reconstruction, training of supervisors and local medical staff, psychosocial programmes for traumatised victims, well-digging/drilling and the resettlement of displaced people.

Since its inception, a faithful circle of friends has supported Medair and this circle continues to grow. Their essential gifts make it possible to launch urgently needed new programmes, accounting for about 10 per cent of total financing. The difference is made up from support by various governmental and institutional partners.

3.3.5 MEDECINS SANS FRONTIERES

Médecins Sans Frontières (MSF) is an international humanitarian aid organisation which provides emergency medical assistance to populations in danger in more than 80 countries. In countries where health structures are insufficient or even non-existent, MSF collaborates with authorities such as the Ministry of Health to provide assistance. MSF works for the rehabilitation of hospitals and dispensaries, vaccination programmes and water and sanitation projects.

The MSF also works in remote healthcare centres and slum areas and provides training for local personnel. All this is done with the objective of rebuilding health structures to acceptable levels.

In order to prevent compromise or manipulation of the MSF's relief activities, it maintains neutrality and independence from individual governments. The organisation also tries to ensure that the majority of funds raised for its work come directly from contributions from the general public. In this way, the MSF guarantees equal access to its humanitarian assistance. The MSF has been setting up emergency medical aid missions around the world since 1971.
3.3.6 OXFAM International

Oxfam International is a group of independent non-governmental organizations working together in more than 100 countries, dedicated to fighting poverty and related injustice around the world. The Oxfams are strategic founders of development projects; providing emergency relief in times of crisis and campaigning for social and economic justice, working together internationally to achieve greater impact by their collective efforts.

Oxfam International was formed to respond to poverty and related injustice in an era in which the structural causes of these problems are increasingly global. To do this, the Oxfams are working to become part of a movement, which is capable of global responses to global issues. They are aiming to create ways of working and structures appropriate to global action in a complex and closely-knit world. To achieve the maximum impact on poverty, Oxfams link up their work on development programs, humanitarian response, lobbying for policy changes at national and global level. Their popular campaigns and communications work is aimed at mobilizing public opinion for change. Through supporting local populations, Oxfam members help people take control of their lives.

3.3.7 SAVE THE CHILDREN

Save the Children works in the UK and across the world. Emergency relief runs alongside long-term development and prevention work to help children, their families and communities to be self-sufficient.

Save the Children was founded in 1919, as a response to conditions in Europe immediately following the First World War. Very quickly, Save the Children gained a reputation as a highly effective relief agency, able to distribute food, clothing and money swiftly and at low cost. By 1921, when the world learnt of extensive famine in Russia, Save the
Children was able to organise an operation to feed up to 650,000 people there at a cost of just a shilling [five pence] per person per week.

3.3.8 SWISS AGENCY FOR DEVELOPMENT AND COOPERATION

The Swiss Agency for Development and Cooperation (SDC) is Switzerland's international cooperation agency within the Swiss Foreign Ministry. Together with other federal offices, the SDC is responsible for overall coordination of development activities and cooperation with Eastern Europe, as well as humanitarian aid. It employs a staff of 500 people to carry out its activities in Switzerland and abroad, with an annual budget of CHF 1.2 billion for 2003 (about US$890,000). The agency undertakes direct action, supports the programmes of multilateral organisations and helps to finance programmes run by Swiss and international aid organisations in the following areas:
- Bilateral and multilateral development cooperation
- Humanitarian aid, including the Swiss Humanitarian Relief Unit (SHA)
- Cooperation with Eastern Europe

Bilateral development cooperation concentrates on 17 priority countries and 4 special programmes in Africa, Asia and Latin America. Approximately 800 projects are currently in operation. At the multilateral level, the SDC collaborates in particular with UN organisations, the World Bank and regional development banks.

The Swiss Humanitarian Aid Unit (SHA) provides direct relief with its own personnel in the wake of natural disasters and during emergencies arising from violent conflicts. Support is given, also financially, to partner organisations engaged in humanitarian activities. Humanitarian aid is provided wherever the need for it is greatest, with prevention, rescue, survival and reconstruction being the core areas of intervention. While humanitarian aid can be offered globally, its
emphasis in the year 2003 is on 17 regions. In the year 2002, the SHA undertook approximately 360 missions. The aim of cooperation with Eastern Europe and the Commonwealth of Independent States (CIS) is to provide support for the transition to democracy and a market economy by means of knowledge transfer and assistance in problem solving. Technical cooperation with Eastern Europe focuses primarily on south Eastern Europe and the CIS. In addition, there are special programmes in the Republic of Yugoslavia (including Kosovo). Approximately 150 projects in 11 priority countries are currently in operation.

3.3.9 AGA KHAN

The Aga Khan Foundation is a non-denominational, international development agency established in 1967 by the Aga Khan. Its mission is to develop and promote creative solutions to problems that impede social development, primarily in Asia and East Africa. Created as a private, non-profit foundation under Swiss law, it has branches and independent affiliates in 12 countries. It is a modern vehicle for traditional philanthropy in the Israeli Muslim community under the leadership of the Aga Khan.

The Foundation focuses on a small number of specific development problems by forming intellectual and financial partnerships with organisations sharing its objectives. Most Foundation grants are made to grassroots organisations testing innovative approaches in the field. With a small staff, a host of cooperating agencies and thousands of volunteers, the Foundation reaches out to vulnerable populations on four continents, irrespective of their race, religion, political persuasion or gender. In 1999, it funded 120 projects in 13 countries and spent $88.9 million.
3.3.10 AIR SERV INTERNATIONAL

Founded in 1984 as East and Central Africa entered one of its worst humanitarian crises, Air Serv International provided essential transport assistance, by providing quick access to people who were critically isolated from emergency aid. Growing out of the early mission focus area on the African continent, Air Serv International soon expanded to include flight services in Central America, the former Soviet Union, the Middle East, Indonesia and Africa.

Air Serv International is one of the few non-profit air and cargo transport organisations providing services to humanitarian organisations which work overseas. In 18 years, it has safely flown more than 132,000 flights and logged over 17 million miles!

Air Serv’s primary objective is to provide safe, reliable and cost-effective air transport to humanitarian agencies involved in relief and development - and to immediately respond to and operate in difficult and dangerous environments. Its operations are often focused on providing access to remote or transport-deficient areas within each country.

3.3.11 INTERNATIONAL RESCUE COMMITTEE

The International Rescue Committee is among the world’s largest non-profit, non-sectarian, voluntary agencies providing assistance to refugees, displaced persons and others fleeing persecution and violent conflict.

It was founded in 1933 at the suggestion of Albert Einstein to assist opponents of Hitler. Since that time, the IRC has been a source of relief, hope and renewal for millions of people around the globe. At the outbreak of an emergency, the IRC delivers critical medical and public health services, shelter and food.
3.3.12 WORLD VISION INTERNATIONAL

World Vision is an international Christian relief and development organisation working to promote the well being of all people - especially children. In 2002, World Vision offered material, emotional, social and spiritual support to 85 million people in 96 countries. Established in 1950 to care for orphans in Asia, World Vision has grown to embrace the larger issues of community development and advocacy for the poor in its mission to help children and their families build sustainable futures.

Almost 80 per cent of World Vision's funding comes from private sources, including individuals, corporations and foundations. The remainder comes from governments and multilateral agencies. Aside from cash contributions, World Vision accepts gifts-in-kind, typically food, medicine, and clothing donated through corporations or government agencies. Approximately half of World Vision's programmes are funded through child sponsorship. Individuals, families, churches and groups are linked with specific children or specific community projects in their own country or abroad. Sponsors pledge a certain amount each month to the support of these children or projects.

3.3.13 DERA

The Disaster Preparedness and Emergency Response Association, International (DERA) was founded in 1962 to assist communities worldwide in their efforts to prepare for the event of a disaster, response and recovery and to serve as a professional association linking professionals, volunteers, and organisations active in all phases of emergency management. DERA currently has active members around the world, representing national governments, non-profit associations, local agencies and departments, educational institutions, corporations, small business concerns, emergency management professionals, researchers, and volunteers.
4. Economic Analysis of the Organisations involved in Humanitarian Missions and statistics

The following data shows the measure in which the international community (particularly the UN and USA) have increased their commitment to Humanitarian Mission from an economic point of view. Some additional data on NGO is also presented in the final part of this section.

4.1 Global Humanitarian Assistance Flows 2003
Development Initiatives, May 2003:
Existing data collected by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) and the Financial Tracking System of the Office for the Coordination of Humanitarian Affairs (OCHA) does not provide a complete insight into total humanitarian aid. More detailed analysis of available evidence suggests that humanitarian assistance is being significantly underestimated, and that in practice, real spending on humanitarian interventions is twice as high as the official figures suggest. Key trends found to be particularly relevant to this study are as follows:

- However it is measured, humanitarian aid has been growing in volume and as a share of Official Development Assistance (ODA). Funds made available for Humanitarian Assistance (HA) have more than doubled from 2 billion in 1990 to $5.5 billion by 2000. From 1999-2001, total HA averaged at $5.5 billion a year and represented about ten percent of ODA.

- When all humanitarian aid spending was added up, including funding from non-OECD donors, general public contributions to NGO’s and the cost of post-conflict peace activities, the resources for humanitarian aid work amounted to approximately $10 billion in 2001.
4.2 UN Statistics

The following statistics focus on goods and services purchased by the UN from external companies.

The growth trend is particularly evident in the air transport services purchased by the UN from external air operators. This increased from about US$ 38 million in 1998 to about US$ 234 million in 2002, a 615 per cent increase in just 4 years. This investment is forecasted to increase further in 2003 even if the final data are not yet available at the time of the writing.

All data are in US dollars (US$)

Goods and services purchased by the UN from external companies

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>318,000,000</td>
<td>468,100,000</td>
<td>687,724,121</td>
<td>854,411,787</td>
<td>812,621,940</td>
</tr>
<tr>
<td>AIR TRANSPORT</td>
<td>38,059,185</td>
<td>50,861,373</td>
<td>174,660,157</td>
<td>221,974,701</td>
<td>234,293,214</td>
</tr>
</tbody>
</table>

Source: United Nations Procurement Division
4.3 UN Budget

Within the UN the department responsible for budgeting is the Fifth Committee (Administrative and Budgetary). At the time of writing, the Fifth Committee has just presented the budget outline for 2004-2005 to the Assembly.

The Committee now holds the Secretary-General’s report on the proposed programme budget outline for 2004-2005 containing a preliminary indication of the resources that the Organisation may require for that period. To arrive at its final estimate, the report takes as a starting point the current level of appropriations and related commitments, amounting to some US$2.7 billion. On that basis, the Secretary-General has, in terms of 2002-2003 prices, proposed a preliminary estimate of resources amounting to some US$2.86 billion. That amount reflects real growth of $158 million, or 5.8 per cent, compared with the approved appropriations for 2002-2003.
The major contributors to the UN budget for 2003 are shown in the table below:

Major donors in 2003
Total amount US$ 2,168,599,355

10 major donors (in value US$)

From the above table it is evident the key role that the USA has in financing the UN.
4.4 WFP Statistics

The following table reflects the activity of the World Food Programme during the last years.

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POOR PEOPLE REACHED BY HUMANITARIAN AID</strong></td>
<td>89 million</td>
<td>83 million</td>
<td>77 million</td>
<td>72 million</td>
</tr>
<tr>
<td><strong>COUNTRIES OF OPERATION</strong></td>
<td>82</td>
<td>83</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td><strong>FOOD AID SHIPMENTS</strong></td>
<td>3.4 million tons</td>
<td>3.6 million tons</td>
<td>4.2 million tons</td>
<td>3.7 million tons</td>
</tr>
<tr>
<td><strong>OPERATIONAL EXPENDITURE</strong></td>
<td>US$ 1.43 billion</td>
<td>US$ 1.16 billion</td>
<td>US$ 1.78 billion</td>
<td>US$ 1.59 billion</td>
</tr>
<tr>
<td><strong>STAFFING</strong></td>
<td>2355</td>
<td>2533</td>
<td>2567</td>
<td>2684</td>
</tr>
</tbody>
</table>

*Source: WFP*

Even if the table presents figures that reflect the considerable effort of the WFP in delivering humanitarian aid, the analysis of these statistics shows a flat growth during recent years leading up to 2002.

A remarkable growth occurred instead during 2003. The figures were released during a briefing in Geneva on 9th December 2003. The United Nations World Food Programme (WFP) increased the number of people it reached this year by 50 per cent, feeding nearly 110 million, compared with 72 million in 2002. Since it was set up in 1963, the
Rome-based organisation has invested $27.8 billion and delivered more than 43 million tons of food to combat hunger, promote economic and social development and provide relief assistance in emergencies throughout the world. The 2003 budget is about US$ 4 billion.

4.5 USAID Budget

Since development was elevated in 2001 to the third leg of the US national security strategy, along with diplomacy and defence, USAID’s budget has doubled from US$7.9 billion to US$14.8 billion in 2003.

The Agency’s new responsibilities include more than US$2 billion for Iraq and Afghanistan relief and reconstruction, US$1 billion in food aid for Ethiopia and other countries and US$1 billion for HIV/AIDS and child survival. US foreign aid spending through USAID increased further on November 6th 2003 when President Bush signed the FY 2004 supplemental appropriation. It includes US$18.6 billion for Iraq and US$1.2 billion for Afghanistan, the largest US foreign aid programme since the Marshall Plan.

But doubling the budget placed a tremendous strain on the Agency because it doesn’t have the surge capacity needed. USAID will have to rely on contractors to supplement the required resources.

USAID’s FY 2004 budget justification to the Congress reflects the Administration’s programme and budget request for bilateral foreign economic assistance appropriations.

4.6 Other NGOs Budgets and Statistics

The following information has been supplied simply to provide additional information about different NGOs’ budgets and statistics.
4.6.1 ICRC Budget

ICRC expenditure in 2002 totaled CHF 821.7 million (about US$ 645 million) i.e. CHF 146.8 million for headquarters and CHF 674.9 million for the field.

The ICRC is funded by contributions from the States party to the Geneva Conventions (governments); national Red Cross and Red Crescent societies; supranational organisations (such as the European Commission); and public and private sources.

4.6.2 ECHO Budget

Echo, the EU’s Humanitarian Aid office, is one of the most important humanitarian players, intervening in 2002 in more than 60 countries to help an estimated 50 million people in need, with an overall budget of EUR 538 million.

The current Air Transport Service funded by ECHO has, since its inception in May 1994, carried over 200,000 passengers, 5.7 million kg of humanitarian freight (such as food, medical supplies and equipment) and flown over 80,000 hours. In addition, more than 200 medical or security evacuations have been carried out successfully, thus contributing significantly to the security of NGOs operating in the area.

On average, five/six single-engine, turbo-prop and/or light twins have been used to transport materials throughout the operation.

Operational bases have changed during the supply period in the light of varying humanitarian requirements. Former operating bases at Lockichoko and Djibouti were closed in 2001, while new operating bases in the Democratic Republic of Congo were established.
The table below shows the block hours flown from May 2002 to May 2003 by ECHO.

<table>
<thead>
<tr>
<th></th>
<th>Beech 1900</th>
<th>Beech200</th>
<th>Beech200</th>
<th>Cessna 208</th>
<th>Beech200</th>
<th>Fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2002</td>
<td>107.80</td>
<td>86.50</td>
<td>14.53</td>
<td>87.03</td>
<td>81.75</td>
<td>377.61</td>
</tr>
<tr>
<td>June 2002</td>
<td>125.78</td>
<td>111.84</td>
<td>127.18</td>
<td>108.55</td>
<td>104.45</td>
<td>577.80</td>
</tr>
<tr>
<td>July 2002</td>
<td>123.22</td>
<td>132.96</td>
<td>115.34</td>
<td>81.35</td>
<td>99.74</td>
<td>552.61</td>
</tr>
<tr>
<td>Quarter 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1508.02</td>
</tr>
<tr>
<td>Aug 2002</td>
<td>125.40</td>
<td>116.42</td>
<td>87.99</td>
<td>93.03</td>
<td>99.86</td>
<td>522.70</td>
</tr>
<tr>
<td>Sept 2002</td>
<td>119.59</td>
<td>111.83</td>
<td>86.19</td>
<td>101.29</td>
<td>97.33</td>
<td>516.23</td>
</tr>
<tr>
<td>Oct 2002</td>
<td>124.45</td>
<td>121.35</td>
<td>78.06</td>
<td>116.83</td>
<td>113.12</td>
<td>553.81</td>
</tr>
<tr>
<td>Quarter 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1592.74</td>
</tr>
<tr>
<td>Nov 2002</td>
<td>127.15</td>
<td>100.47</td>
<td>81.78</td>
<td>92.13</td>
<td>139.12</td>
<td>540.65</td>
</tr>
<tr>
<td>Dec 2002</td>
<td>118.82</td>
<td>88.00</td>
<td>87.87</td>
<td>81.41</td>
<td>148.10</td>
<td>524.20</td>
</tr>
<tr>
<td>Jan 2003</td>
<td>115.87</td>
<td>95.08</td>
<td>72.48</td>
<td>85.67</td>
<td>170.07</td>
<td>539.17</td>
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<tr>
<td>Quarter 3</td>
<td></td>
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<tr>
<td>Feb 2003</td>
<td>119.05</td>
<td>93.70</td>
<td>75.36</td>
<td>102.13</td>
<td>144.70</td>
<td>534.94</td>
</tr>
<tr>
<td>March 2003</td>
<td>128.38</td>
<td>119.24</td>
<td>67.89</td>
<td>95.16</td>
<td>164.87</td>
<td>575.54</td>
</tr>
<tr>
<td>April – 8th May 2003</td>
<td>155.23</td>
<td>116.48</td>
<td>47.48</td>
<td>55.67</td>
<td>253.05</td>
<td>627.91</td>
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<tr>
<td>Quarter 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1738.68</td>
</tr>
</tbody>
</table>

### 4.6.3 MEDAIR Budget

Medair net expenses were €11.8 million. (about US$ 15 million) in 2001, of which the costs incurred by the Swiss Head Quarters represent only 14% ore cent. This percentage comprises administration (11.1 per cent), training (0.5 per cent) and promotion (2.4 per cent) costs. The other 86 per cent goes directly to projects in the field.

### 4.6.4 SAVE THE CHILDREN Budget

In a competitive fund-raising climate, Save the Children maintained its income at over £110 million for 2002 (US$ 215 million).
4.5.5 SDC Budget

SDC employs a staff of 500 people to carry out its activities in Switzerland and abroad, with an annual budget of CHF 1.2 billion in 2003 (about US$890.000).

4.6.6 AGA KHAN Budget

In 1999, it funded 120 projects in 13 countries and spent US$ 88.9 million.
5. Geopolitical Analysis

Previous data show a clear increase in international commitment to the delivery of humanitarian aid. Driven by US policy, the international community is trying to improve the conditions of the poorest countries, in order to avoid waves of clandestine immigration and terrorism which have originated in those areas.

The following years will witness a major change in the structure of international aid. New instruments have either been launched, as in the case of the Global Fund and US Millennium Challenge Account, or mooted, in the case of the International Financing Facility. These changes will have profound implications for the system as a whole.

Attitudes to multilateralism and to aid in post-conflict environments have shifted profoundly in the wake of 9/11. Ambitious commitments to the volume and quality of aid and its anchorage in good governance and sovereign choice, have yet to be implemented.

A wealthier Third World also means a more fertile ground for economic initiatives. The ‘globalisation era’ urgently requires steps to be taken in this area.

The author’s thesis is that the international community will further increase its commitment to humanitarian missions and post-conflict aid and will also develop current levels of international assistance.

Air transport will play a strategic role in this contest, owing to necessity for moving humanitarian aid, people and freight in areas which are usually vast, uninhabited and hostile and which, moreover, lack any alternative means of transport. Furthermore, in the case of emergency responses, air transport is the only means of providing at least some timely assistance.

In view of this scenario, air operations will see two different areas of involvement: one will be concerned with the delivery of aid via humanitarian missions and the delivery of development assistance, while the other will relate to the civil air transport of goods and people in peacekeeping operations.
In order to further illustrate the increased international commitment in humanitarian missions, a short presentation of the new US development-assistance policy and the UN Peacekeeping operations will follow.

5.1 USAID

For the first time in their history, the US Department of State and USAID have jointly prepared a strategic plan and are working together to execute it. Foreign policy and development programmes are fully aligned for advancing the USA’s National Security Strategy, issued by President Bush in 2002. The National Security Strategy recognizes that diplomacy and development assistance are critically important tools for building a safer, freer, better world.

At the same time, USAID will increase its attention toward failed and failing states, which the President’s National Security Strategy recognizes as the source of most significant security threats — namely, international terrorism and the proliferation of weapons of mass destruction (WMD).

“American diplomacy in the 21st century is based on fundamental beliefs: our freedom is best protected by ensuring that others are free; our prosperity depends on the prosperity of others; and our security relies on a global effort to secure the rights of all.” (President G.W Bush)

Leaving aside the demagogy contained in the statement, it is clear that US involvement will be tangible, and the Millennium Challenge Account (MCA) is a clear demonstration of this.

5.2 Millennium Challenge Account (MCA)

An important indicator of the increased international involvement in delivering aid to Third-World countries is the MCA.
On February 5th 2003, President George W. Bush submitted the MCA to Congress, thereby allying himself with Presidents Truman and Kennedy in efforts to unveil a vision for development, based on the shared interests of developed and developing nations alike. The President sees a global development effort focused on peace, security, and prosperity. Indeed, this initiative is focused on improving the global record of eradicating poverty.

The MCA represents a new approach to providing and delivering development assistance. This new compact for development breaks with the past by tying increased assistance to performance and creating new accountability for all nations. This proposal implements the USA’s commitment to increasing current levels of core-development assistance by 50 per cent over the next 3 years, thus providing an annual increase of US$5 billion by the fiscal year 2006. When fully implemented, this MCA would double the scale of US poverty-focused development. This historic proposal calls for an additional $1.7 billion in 2004, $3.3 billion in 2005 and $5 billion in 2006 and each year thereafter. The funds will be devoted to programmes that help hungry and poor people become self-reliant.

5.3 Department of Peace Keeping Operations (DPKO)

Peacekeeping operations today are playing a decisive role in international policies. Western countries are increasingly adopting an intervention strategy in certain countries in the wake of 9/11. Peacekeeping operations are always linked to humanitarian operations, and the UN DPKO often collaborates with other UN agencies (such as the WFP) and NGOs.

UN peacekeeping operations depend mainly on the UN Security Council, which has special responsibility for maintaining international peace and security. The Council can exert diplomatic and political pressure on the parties in a conflict or else provide a means for settling the dispute, including fact-finding or mediation missions. Once a truce is in place, the Security Council can deploy a peacekeeping
operation to help the parties carry out their agreements. When persuasion fails, the Security Council can take stronger action, such as imposing economic sanctions or declaring a trade embargo. On some occasions, the Council has authorized member states to use "all necessary means", including force, to deal with armed conflict. Such enforcement actions – carried out under the control of participating states – have included actions to restore the sovereignty of Kuwait (1991); the legitimate government of Haiti (1994); peace and security in the Central African Republic (1997); and to end a campaign of violence in East Timor (1999) following a referendum on self-determination.

The Security Council establishes UN peacekeeping operations, where decisions are subject to veto by any of the Council's five permanent members — China, France, the Russian Federation, the UK and the USA. The Council determines the mandate, size, scope and duration of an operation based on recommendations, including financial information, provided by the Secretary-General. The General Assembly then votes on the operation's budget.

The Council determines peacekeepers' duties according to the requirements of each situation. They may monitor a ceasefire, establish a buffer zone, help former opponents carry out a peace agreement, protect the delivery of humanitarian aid, assist with the demobilization of former fighters and their return to normal life, set up mine-clearance programmes, supervise or conduct elections, train civilian police, and monitor respect for human rights. UN missions have also been asked to assume temporary administration of certain territories, as in East Timor during the period leading up to its independence in 2002.

Peacekeeping operations have their own budgets. The DPKO-approved budgets for the period from 1 July 2003 to 30 June 2004 is about US$2.81 billion. These are assessed separately by the General Assembly, according to a special scale based on that used for the regular budget. The scale provides for a higher assessment on the five permanent members of the Security Council, which hold the power to
veto Council decisions and, as stressed by the Assembly, have "special responsibilities" towards peacekeeping operations.

In 2001, the five – China, France, the Russian Federation, the UK and the USA – were assessed in terms of some 47 per cent of peacekeeping costs (down from 49 per cent in 1998 and 57 per cent in 1992). With effect from 1st July 2001, a group of 25 developed countries have been assessed in accordance with the regular budget scale. The remaining member states, grouped into eight categories based on their per capita Gross National Product (GNP), are assessed at progressively reduced rates – with a significant reduction for developing countries.

As the member state with the largest Gross Domestic Product (GDP), the USA was assessed at just under 31 per cent for peacekeeping costs in 1996. By 1998, that had dropped to just over 30.5 per cent. At the end of 2001, the assessment was 27.6 per cent.

Member States, regional organisations and the UN Secretariat are working to improve overall preparedness, standby capacity, logistical support and training. By 2001, 91 Member States had expressed their willingness to enter into standby arrangements with the UN. Sixty-eight of these specified the resources they could make available if they decided to participate in an operation and 36 signed standby agreements. Within this framework, a group of member states has established a Standby Forces High Readiness Brigade to enhance the capacity of their troops to serve together in a peacekeeping context. Nearly 70 nations are now offering troops in a UN "stand-by" system for peacekeeping duty. Austria, Canada, Denmark, The Netherlands, Norway, Poland and Sweden have created a Standby Forces High Readiness Brigade which can be used for peacekeeping when the conflicting parties agree.
6. Characteristics of Air Transport in Humanitarian Missions

This section will focus on the characteristics of Air Transport in Humanitarian Missions and in particular on the operational requirements and safety issues. A brief analysis of the type of aircraft used in these missions is also included.

6.1 Operational Requirements

6.1.1 Range

The range of operation varies according to the type of mission. Usually long-distance transportation of aid is accomplished by ships (whenever possible) even if, in the case of inaccessible areas inland or emergency rapid response, long-range aircraft, such as the C5 Galaxy, can be used.

Owing to the occasional nature of long-range operations in relief flights, there is no civil airline dedicated to this kind of operation,
whereas military aircraft are often used and some civil operators can be occasionally contracted for a limited number of flights, usually for passenger transportation.

The most common range of operations in relief flights is medium to short range. Usually the aids to be delivered are concentrated on a main base, conveniently located, from where short- and medium-range aircraft depart for remote areas and camps to deliver aids.

6.1.2 Types of delivery

Apart from the transport between camps of personnel involved in humanitarian operations, aid is delivered in two ways: via airdrops and conventional cargo transportation. An airdrop is used when it is necessary to reach a large number of people on the move (usually refugees) or when the landing of the aircraft is not considered to be safe.

Air drops are delicate flight operations which require technical ability and have safety implications owing to the sudden change in the
aircraft’s centre of gravity (CG). Aircraft used for this kind of operation are usually military types, like the civil version of the Hercules C130 (L100) and Buffalo.

Conventional cargo transport is usually accomplished by medium and light aircraft. Aircraft are usually required to have Short Take Off and Landing (STOL) capabilities and must be able to take off and land on unpaved runways. It is preferable that cargo aircraft are equipped with a rear-ramp door, in order to facilitate the loading and unloading operations from places which lack any kind of equipment and facilities. Unfortunately civil aircraft design does not take the rear-ramp door into consideration, so this particular type of aircraft is only found among military aircraft which have been converted for civil operations.

6.1.3 Weather and terrain

Adverse climate and terrain are two important characteristics that have to be considered in humanitarian operations. Usually relief flights take place in Third World countries where a hot climate is usual - even if recent missions (like the UN one in Afghanistan) required the operators to work in extremely cold weather. Weather and terrain have to be considered very seriously. For example, high temperatures can severely affect aircraft performance, thus reducing the payload, while adverse terrain (such as the presence of sand) can badly damage the engines.

In short, humanitarian operations take place in an environment that is far from the one in which most civil aircraft are designed to operate. For this reason, civil versions of military aircraft are usually best suited for this kind of operation, even if there are a few civil aircraft specifically designed to operate in these conditions.
6.1.4 Airfields

Airfields from where humanitarian flights operate range from isolated strips to international airports which have been destroyed by war. Each operation has of course its own peculiarity, but the common factor is that relief flights have to operate from unprepared, damaged or unpaved runways. Sometimes, those runways are just very short strips of sand or grass and the STOL capability of the aircraft, together with the latter’s tough structure, play a very important role in the success of the mission.

6.1.5 Aircraft

A performance analysis of the most widely used aircraft in humanitarian operations has been carried out, particularly in terms of medium-to-light aircraft. The different aircraft data are contained in Appendix 1.

The aircraft considered are:

L100
HS 748
Shorts 330-360
CASA 212
DHC6 Twin Hotter
Cessna Caravan
King Air 200
Beechcraft 1900
6.2 Safety Issues

There are many important safety issues in the field of air transport and humanitarian missions. These are mainly related to:

- The nature of the operation
- War risks
- Use of old aircraft
- Use of Third World operators
- Non-compliance with UN requirements

The nature of the operation itself provokes important safety issues, owing to the dangerous environment where aircraft have to fly and the lack of any assistance, either from the point of view of Air Traffic Control or ground support.

War risks are often associated with humanitarian flights and are always present in peacekeeping operations. There have been many reports in the past of UN aircraft shot down by enemy fire. For example:

**26 April 1993: ANGOLA** – A UN Antonov 12V operated by the World Food Programme and carrying 7 crew members was hit by a SAM missile while flying at FL160. A forced landing had to be carried out in a field near Luena. One crew member was killed after stepping on a mine.

**26 December 1998: ANGOLA** - A UN transport plane, carrying 14 people - 10 UN personnel (8 of them UN international staff) and 4 crew - was shot down and crashed in Angola's central highlands. The Hercules C-130 transport plane was on a humanitarian mission, taking UN Observer Mission in Angola (MONUA) officials from Huambo to
Saurimo in North East Angola. On 8 January 1999, the wreckage was found with all passengers killed in the crash.

**2 January 1999: ANGOLA** - The C-130 chartered by the UN observer mission to Angola (MONUA) was shot down soon after take-off from Huambo on January 2nd. The plane was returning to Luanda after transporting emergency rations to Huambo in South Central Angola. The wreckage was found in an area 17 to 20 km north east of Huambo. The United Nations World Food Programme confirmed the death of one of its Angolan staff members, Pedro Moreira, who was among the nine passengers and crew of the UN-chartered C-130 plane that crashed in the central highlands of Angola.

**9 May 2001: SUDAN** - A Danish co-pilot of a plane chartered by the International Committee of the Red Cross (ICRC) was killed over southern Sudan when the aircraft was hit by projectiles of unknown origin. The co-pilot, Ericksen Ole Friis, 26, was killed immediately, after being struck in the head by a projectile which passed through the fuselage. The nature and origin of the projectile, one of at least three to hit the plane, could not be immediately established. The pilot managed to turn back and land the plane at Lokichokio in northern Kenya, a base used by humanitarian organisations operating in southern Sudan. ICRC had leased the plane from a Danish company, Aviation Assistance, and it flew from Lokichokio to Khartoum every Wednesday, via Juba and Wau, two government garrison towns in areas otherwise occupied by the rebel Sudan People’s Liberation Army (SPLA).

Another important safety issue is the use of aging aircraft in humanitarian missions. The nature of the operations, together with budget constraints within all NGOs and the UN, make the use of old aircraft a forced choice. The use of relatively new aircraft in humanitarian missions is not convenient because - apart from economic constraints - aircraft usually have to operate from
unprepared, damaged or unpaved runways, thus resulting in their aging prematurely. The only way to satisfy the need for low-budget aircraft together with the need for operating in conditions that inevitably damage the equipment, is to use aging aircraft. Undoubtedly the lack of appropriate airworthiness checks in Third World countries leads to the indiscriminate use of aged aircraft which could not operate in other countries.

Third World operators are often contracted for humanitarian missions, both for political and economical reasons. A great part of the world humanitarian missions operate in Africa. In its summary of 2003, the Aviation Safety Network said: “Africa was (during 2003) again the most unsafe Continent. Twenty-eight per cent of all fatal accidents happen in Africa, while the region only accounts for 3% of the world’s departures.”

Russian and Eastern European aircraft are also widely used in humanitarian missions. This region has a very bad safety reputation as well. Every year the highest number of accidents and serious incidents is recorded among airlines operating Eastern European aircraft, such as Tupolevs, Ilyushins, Yaks and Antonovs. Russian airlines are quite common in UN operations, thanks to their very low cost (compared with Western operators) and the wide availability of aircraft particularly suited for this kind of operation. The fact that Russia is also a permanent member of the UN Security Council may also be of some help.

The UN has laid down aviation standards for peacekeeping and humanitarian air-transport operations. The Aircraft Operator Requirements are contained in Section 3 of the Aviation Standards and they basically reflect ICAO and JAA requirements (ICAO is a branch of the UN). Hopefully, these Standards will be fully implemented in the near future, thus providing a higher level of safety in this particular field of operations. There are signs of an increased commitment on the
part of the UN in this direction, spurred on by the high number of air-
traffic accidents.

6.2.1 Safety statistics

There is a lack of accurate aeronautical safety statistics in
humanitarian operations. In 2003, the UN WFP began the recruiting of
Flight Safety Officers and collecting information on safety matters. An
appropriate database is expected to be in operation from 2004. The
following table is the result of reports produced from 1st January 2003
to 1st August 2003 by WFP Flight Operations. The data does not
represent the real safety trend because it has not been collected and
recorded with the standard format. The names of the operations have
been changed to A, B, C, and D for confidential reasons.

<table>
<thead>
<tr>
<th>Air Transport Service Operation</th>
<th>Hrs Flown</th>
<th>Accidents</th>
<th>Serious Incidents</th>
<th>Major &amp; Significant Incidents</th>
<th>Occurrences w/out Sign. Safety Effect</th>
<th>Undetermined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1,562</td>
<td>NIL reported</td>
<td>NIL reported</td>
<td>06</td>
<td>NIL reported</td>
<td>00</td>
</tr>
<tr>
<td>B</td>
<td>9,404</td>
<td>01 no fatalities</td>
<td>04</td>
<td>68</td>
<td>53</td>
<td>02</td>
</tr>
<tr>
<td>C</td>
<td>2,099</td>
<td>NIL reported</td>
<td>NIL reported</td>
<td>01</td>
<td>NIL reported</td>
<td>00</td>
</tr>
<tr>
<td>D</td>
<td>15,537</td>
<td>03 01 fatality on the ground</td>
<td>13</td>
<td>12</td>
<td>30</td>
<td>00</td>
</tr>
</tbody>
</table>
Occurrence Classification

ACCIDENTS 4
SERIOUS INCIDENTS 17
Major and Significant Incidents 87
Occurrences w/o significant safety effects 83
Undetermined 2
Total 206

Total Flight Hours: 28,602
Average Accident Rate: 1.4 every 10,000 hours

Flight accident rates in civil aviation are usually quoted as the number of occurrences per million departures, simply because it is well known that most of accidents happen when the aircraft is taking off or landing. Therefore the number of departures provides a more reliable statistic.

Unfortunately, there is no precise data on the number of take-offs and landings in WFP operations but the average leg duration is about 1.5 hours.

Taking that parameter as an indication, it is possible to estimate the WFP flight accident rate per million departures as 210.

Even if the accident rate refers to WFP data only and is quite approximate, it is evident that there is a huge difference between this and the civil aviation accident rate which is about 1.

On the basis of the data collected, it is probably true to state that humanitarian flight operations are 200 times more dangerous than any civil aviation operation.

Air safety and security are usually co-ordinated by security officers in the field. They receive updated information on safety matters and co-ordinate the operations accordingly. They have the power to cancel any flight at any time, to close any field to flight operations and to order safety evacuations.
6.3 Economic Issues

6.3.1 Contracting the UN

The UN and the major humanitarian organisations (like ICRC) provide contracts by call for tender only. To bid for a UN call it is necessary to be registered as a UN vendor. The office concerned with this is the UN Procurement Division (PD).

To be considered for registration within the UN, potential suppliers shall provide the PD with information which includes:

- Application Form
- Most current and valid copy of certificate of incorporation
- Latest certified/audited financial statements, (ie balance sheet and income statement)
- General information about the company, including copies of standards of quality certification
- Letter of reference from at least three clients to whom the company has provided goods/services over the past twelve months

Prospective suppliers must have a minimum of three years’ operational experience in their line of business. The UN, on the basis of the financial soundness of the supplier and the experience and relevance of the goods or services offered, will evaluate each complete application and finally add the airline to the list of UN Air Charter Services Operators.

Once the company has been registered with the UN, it is possible to bid for the periodical Call for Tenders that are regularly issued in accordance with the number of current UN operations.

Contracting governmental organisations like the UN also involves some political networking.
Operators are formally chosen on the basis of:
- Requirements issued in the Call for Tender
- The airline’s operational and technical compliance with the requirements
- Economic offers

Once the operational requirements are issued on the Call for Tender and met by the operators, the lowest bid will win the contract. Usually the Call is closed a few hours after the official opening date and time. The UN issues about four or five Calls for Tender per month in the Aircraft Charter Service. An example of the recent UN Invitations to Bid is contained in ANNEX 2.

6.3.2 Budget constraints and safety

UN operations are faced with budget constraints that make the establishment of a high standard of safety very difficult. In order to reach the desired degree of safety, it is necessary for the contracted operator to fulfill its obligations, as laid out in the Aviation Standards. The correct implementation of Safety Standards results in higher operating costs to the operator. It is obvious that many Eastern European and African operators are able to meet the desired level of quality and safety only from a formal point of view. Consequently they are also able to offer aircraft to the UN at a lower price. The requested level of safety and quality in air operations can be reached by the UN only when greater attention is paid to the operators’ standards. If operators comply with the applicable Aviation Standards this should be reflected by higher price offers in the UN Invitation to Bid.

As an example, we can take a light cargo aircraft operating under a JAR-OPS AOC. A reasonable offer for operating that aircraft could be US$1,200 per flight hour. An African operator can offer a similar
aircraft for only 6/700 US$ per hour, thanks to the several “short cuts” allowed by the system.

During 2003, many East European aircraft were modified according to JAR-OPS requirements (mainly on the avionic side) and there were signs of rising concerns about safety among Third World operators. However, UN air operations need a stronger implementation of the required Aviation Standards and of course the UN should be ready to pay for this.
7. CASE STUDY: Starting An Airline Dedicated To Humanitarian Missions

Having identified the main organizations involved in air transport for humanitarian missions and having analysed its characteristics, there now follows a case study on starting up a small operation dedicated to this market.

7.1 The operational scenario

Sudan is the operational scenario targeted for the start up of the operation. This much-troubled country is one of the largest African states and suffers from a lack of roads and transport connections. Air transport is the only possible way to provide the necessary supply of food and freight within this territory.

The southern (Christian/animist) part of the country is tormented by war and famine but a ceasefire has just been signed with the Islamic northern (Islamic) part of the country, where the city of Khartoum, home to the official government, is located.

The southern part of Sudan is very rich in oil deposits and the US government is very active in and sensitive towards developments in this area.

The UN is deploying a massive peacekeeping operation in support of the armistice signed between the northern and southern sides. Naturally, the presence of very rich oil fields is a significant incentive for this operation.

The UN estimates the need for at least 40 aircraft in Sudan for the period 2004-2005, in addition to the already existing fleet operating within the Operation Lifeline Sudan (OLS).
7.1.1 The complex political emergency in Sudan

The origins of the current complex political emergency in Sudan date back more than forty years, when the first civil war began. Boundaries drawn up in the colonial period do not reflect the reality of a country populated or controlled by:

- Nomadic tribes in the most northern part (including the Nubian desert, rich in an ancient Egyptian heritage)
- The Islamic-run official government of Sudan in the northern part of this vast country
- The Christian/Animist population in the south. The rebel movements (the SPLA and SSIM) control the oil-rich southern part of Sudan

Key features of the war have included the deliberate targeting of civilians, the denial of all possible support to the opposite side, and the attempt to gain access to valuable resources. The result has been a chronic state of emergency which defies the traditional model of a contained, short-term event. There are periods of particularly acute humanitarian suffering and need, of which the most recent and most severe example has been the 1998 famine in Bahr El Ghazal.

The OLS, a unique tripartite agreement formalised in 1994 between the Government of Sudan (GoS), the rebel movements in the south (SPLA and SSIM) and the UN, has resulted in the co-ordination of much of the international humanitarian response to Sudan’s complex political emergency.

Key features of the OLS include:

* Humanitarian access based on negotiation between the UN and the warring parties
* Significant periods when humanitarian access has been denied
* Recognition of the sovereignty of the GoS
The *de facto* development of very different operational environments in the government-held northern sector and the rebel-held southern sector of the OLS.

Growth in coverage of the OLS, particularly in the southern sector, in terms of the locations reached and the number of agencies operating within the framework.

A number of agencies operate outside the southern sector of the OLS, mostly for strategic reasons.
7.1.2 Background

For nearly 20 years, the Sudanese population has been adversely affected by armed conflict, famine and disease, largely associated with the civil war between the Government of Sudan (GOS) and the Sudan Peoples' Liberation Movement/Army (SPLM/A). Since 1983, more than two million people have died from conflict-related events and more than 4.6 million people have been displaced, creating the largest internally displaced person (IDP) population in the world. Sudan has experienced three periods of famine over the last 13 years – in Bahr el Ghazal in 1988-1989 and 1998 and on the Upper Nile in 1992-1993.

In response to the 1988-1989 Bahr el Ghazal famine, the UN established Operation Lifeline Sudan (UN/OLS), a tripartite agreement of negotiated access among the GOS, the SPLM/A, and the UN. Under this framework, a consortium of UN agencies and more than 40 international and local non-governmental organizations (NGOs) provide emergency relief and rehabilitation assistance in Sudan.

In addition, more than ten international NGOs provide humanitarian assistance outside of the UN/OLS consortium. Since the civil war began in 1983, the United States Government (USG) has provided more than $1.7 billion in humanitarian assistance to the Sudanese population.

Operation Lifeline Sudan (OLS) was established in April 1989. It is a consortium of two UN agencies, UNICEF and the World Food Programme, and more than 35 non-governmental organizations. Operating in southern Sudan after devastating famine, a result of drought and civil war, the OLS negotiated with the Government of Sudan and the Sudan People's Liberation Movement/Army (SPLM/A) the delivery of humanitarian assistance to all civilians in need, regardless of their location. Although the OLS has saved lives and assisted hundreds of thousands of people, its mission is far from over. Lack of timely rain and the displacement of people prevents farmers
from cultivating the land, thereby making it impossible for the people of South Sudan to become self-sufficient.

The US (under the Bush administration) has increased its interest in this oil-rich area. Since 2001, following President George W. Bush's appointment of USAID Administrator Andrew Natsios as Special Humanitarian Coordinator for Sudan and former US Senator John Danforth as Special Envoy for Peace to Sudan, the USG has been at the forefront of serious and sustained international engagement with the GOS and SPLM/A. The aim has been to increase humanitarian access to war-affected areas and to support the peace process. By the end of 2002, the USG’s involvement resulted in a formal ceasefire agreement in the Nuba Mountains area, a framework for the cessation of attacks against civilians, the establishment of periods of tranquillity for special humanitarian programmes, and an international inquiry into slavery in Sudan. In addition, US involvement helped to establish a favourable environment for peace talks under the auspices of the regional Intergovernmental Authority on Development (IGAD).

The IGAD-sponsored peace talks in Machakos, Kenya, led to the Machakos Protocol signed by the GOS and SPLM/A on July 20, 2002. This established an overall framework for peace. A Memorandum of Understanding (MOU) signed on October 15 2002 called for the cessation of hostilities between the parties and unimpeded humanitarian access throughout Sudan.

As the prospects for a long-term peace settlement in southern Sudan improved during 2003, the security situation in western Sudan worsened. Hostilities and fighting between the Sudanese Liberation Army/Movement (SLM/A), an opposition group operating in Darfur, and forces loyal to the GOS intensified, adversely affecting the humanitarian situation among civilian populations in Darfur.
7.1.3 Sudan Complex Emergency-related data

<table>
<thead>
<tr>
<th>Total Death</th>
<th>More than 2,000,000</th>
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<tbody>
<tr>
<td>Internally Displaced Persons (IDPs)</td>
<td>More than 4,600,000</td>
</tr>
<tr>
<td>Sudanese Refugees</td>
<td>536,000 - Total</td>
</tr>
<tr>
<td>Refugees in Sudan</td>
<td>327,000 - Total</td>
</tr>
<tr>
<td>Total FY 2003 USG (only) Humanitarian Assistance to Sudan</td>
<td>$162,915,794</td>
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7.1.4 Peace Talks

On September 21 2003, the GOS and the SPLM/A extended the negotiated ceasefire by two months to the end of November 2003. This marks the third extension of the original six-month ceasefire signed in October 2002.

On September 25 2003, following three weeks of direct negotiations between high-level GOS and SPLM/A officials, the parties signed a security agreement. The deal proposes the establishment of two separate armed forces for northern and southern Sudan, integrated military units and an internationally monitored ceasefire agreement following a final peace settlement.

On October 29 2003, the UN Office for the Coordination of Humanitarian Affairs (UN OCHA) and the Integrated Regional Information Network (IRIN) reported that the Verification and Monitoring Team (VMT), an international group mandated in February 2003 to monitor the accord for the cessation of hostilities, had resumed its work, focusing on the creation of a field base near Ler, Western Upper Nile.
7.1.5 Humanitarian Access

In FY 2003, the USAID led an international effort to mobilize donors to put pressure on the GOS for unimpeded humanitarian access. On October 15 2002, after the denial of access had led to a crisis in September 2002, the GOS and the SPLM/A signed an MOU, stating again that they agreed to allow unimpeded humanitarian access to the entire region. On October 25 2002, a smaller technical group met with the UN and agreed on terms to implement the MOU. NGOs operating under the UN/OLS umbrella have benefited directly from increased access, while USAID-supported organizations outside the UN/OLS framework have also expanded operations thanks to improved security conditions.

From August 28 to September 2 2003, a USG delegation led by Roger Winter, USAID's Assistant Administrator for Democracy, Conflict, and Humanitarian Assistance (AA/DCHA), travelled to Sudan to speak with GOS representatives about four humanitarian access concerns: the new government policy on genetically modified food assistance and security in Darfur, Abyei, and the Eastern Front.

7.1.6 Oil fields in Sudan
7.2 The Aircraft – CASA 212

Several meetings with UN Officers (including the WFP Air Ops Manager and DPKO officers) have underlined the role that the CASA 212 can play in Sudanese operations. Its ability to take off and land from very short runways or airfields, together with the capability to carry small jeeps or other cargo or up to 19 passengers, make it one of the aircraft best-suited to operate in the Sudanese theatre in the future.

The CASA 212 is a very reliable aircraft which has already proved extremely effective in flight operations to remote areas, thanks to its STOL capabilities, its solid structure and its rear ramp door.

The two aircraft offered are a –100 and a –200 series, as specified below. Both are certified and available in cargo and/or passenger configurations. The configuration change takes less than an hour.

The two aircraft have been JAR-OPS 1-operated and certified, meaning that they are equipped with FDR, CVR, ELT, EGPWS, Terrain Display, B-RNAV, Garmin GPS and weather radar, together with standard navigation and communications equipment.

The aircraft are currently maintained in perfect efficiency. All FAA AD, DGAC AD and CASA Mandatory SB have been complied with.

Maintenance is performed according to JAR-145 and JAR-OPS 1 regulations and with the use of the approved Maintenance
Management Exposition (MME) and Aeroplane Maintenance Programme (AMP).

During the last eight years, aircraft maintenance has been performed by the contracted Swedish company Saab Nyge Aero, a well-established JAR 145 facility which is also responsible for the maintenance of the CASA 212 fleet operated by the Swedish National Coast Guard.

Fleet information can be summarised as follows:

CASA 212-200 SE-LDG
Maximum Take Off Weight: 7,700kg
Maximum Payload: 2,600kg
Passenger capacity: 19pax
Max Range: 960NM
Endurance: 5.5hrs
Maximum Speed: 200Kts
Maximum Operating Altitude: 25,000ft

CASA 212-100 SE-LDB
Maximum Take Off Weight: 6,500kg
Maximum Payload: 1,650kg
Passenger capacity: 19pax
Max Range: 990NM
Endurance: 6hrs
Maximum Speed: 200Kts
Maximum Operating Altitude: 25,000ft
7.3 Aircraft Operations and policy

Since the aircraft are fully Jar-Ops compliant, they will operate under a JAR-OPS AOC. This choice will ensure a high standard of safety and quality in aircraft operations.

The company’s policy will be to establish very efficient and safe operations according to UN requirements. The intention is to meet successfully the safety requirements which are often ignored by Third World operators.

The natural consequence of this policy will be a reduced profit margin since the being the company’s costs will be higher than average, especially in the following areas:

* Aircraft Maintenance (under JAR 145 requirements)
* Quality Assurance
* Pilot training and qualifications (in accordance with JAR-FCL)

Even if the operational costs of the company will be higher than those of most African companies, it should be emphasised that these will be the result of meeting the increased commitment of the UN to safer air operations. The broader aim is to establish a professional relationship with the various UN Air Ops Departments.

The first year of operations under this policy will determine whether or not the increased commitment to Safety and Quality is sustainable by the company. If the economic results prove a negative, the logical response will be to transfer the aircraft to an East African AOC.
7.4 Contracting the UN

As previously stated, only companies registered as UN vendors can respond to the invitation of the UN for air-charter services.

To register a company as a UN vendor, both financial and technical criteria must be met. By registering as a JAR-OPS operator, all the technical requirements are basically satisfied.

On the financial side, the UN requests a solid background from the prospective suppliers. They must have a minimum of three years’ experience/establishment in their line of business. The UN, on the basis of the financial soundness and experience of the supplier, will evaluate each complete application and finally add the airline to the current list of UN Air Charter Services operators.

The company may not meet the above financial requirements, especially since its incorporation is too recent to fulfil the ‘three year’ regulation. In this case, it may be possible to provide the UN with financial warranties by signing a “performance bond” which is basically a bank guarantee provided by the company to the UN in order to secure the contract.

Once the company has been registered within the UN it will be possible to bid for the Call for Tenders concerning Sudan operations. These started in February 2004 and will continue through the year.

7.4.1 Contracts, Pricing and Economic plan

The UN contracts for the Sudan operation will include long-term agreements with the DPKO (one to two years), as well as other possible contracts with the WFP.
Those contracts usually require a monthly fixed amount of flight hours (80-100) per aircraft. The UN pays the sum to the operator. If this minimum guaranteed flight time is exceeded, the UN will pay the positive difference on a monthly basis. Throughout the term of the contract, the UN will also pay the operator the minimum guaranteed flight time every month.

Having a minimum guaranteed flight time and knowing that it usually corresponds to the actual time spent flying, the pricing calculation can be done. This pricing has an enormous bearing on the whole operation, because the UN awards the contract on a price basis.

Pricing is expressed as US$/flight hours. In this calculation, fuel is not considered because it is supplied directly by the UN. In fact, only the fuel necessary for transferring the aircraft to the area of operations is considered.

Another important factor concerns knowledge of the other operators involved in the bidding. Once the operators are invited to bid, the bidder offering the lowest price will secure the contract.

Pricing for the CASA 212, operated as previously described, has been carried out in terms of the following economic plan. This reflects the price of the aircraft/flight hour of US$ 1,000 and a contract for 83-hours/ aircraft/month (thus giving an easy 1,000 hours per year).
7.4.2 Economic Plan

ALL DATA IN US$ 

UN contract= 1000 $/fh  min.83 hours per month (1.000 fh/y) 
for each aircraft

OPERATING COSTS per Flight hour (fh) per single aircraft (a/c)

Maintenance
>Manpower (2 hours per fh) 140
>Spare parts 125
>Overhaul ($200,000 per engine, expect after 3 yrs, calc 1.000 fh/y) 133

Fuel
>on UN bill, calc just for transfers 10

Leasing
>calc. For 5 years, approx $500.00 per a/c 110

Pilots
>Captain (1.5 per a/c at $70,000/Y) 105
>First officer (1.5 per a/c at 20,000/Y) 30
>Accommodation and Transport 45

Insurance
including war risks 80

Fixed costs calculated for two a/c
>Company, secretary admin (ext. 80,000/Y) 40
>AOC, ext. 100,000/Y for 2 a/c 50

Contingencies 30

TOTAL COST PER FLIGHT HOUR 898

Company's overhead = 1000-total cost 102

Annual estimated profit (overhead X tot.fh X 2 a/c) 204,000
8. Conclusions

Five key conclusions emerge from this analysis:

First, it is evident that humanitarian missions around the world have increased in recent years. However it is measured, the volume of humanitarian aid has grown in recent years. Evidence for this can be found in the following:

- Funds made available for humanitarian assistance worldwide have more than doubled between 1990 and 2000.
- The air-transport services purchased every year by the UN from external air operators increased more than 6 times between 1998 and 2002.

Second, the present political scenario and geopolitical analysis suggest that the international community will further increase its commitment to humanitarian missions. Post-conflict aid will also develop current levels of international assistance. Throughout the 1990s, there was an emerging consensus that the issue of ‘security’ was concerned not only with bombs, bullets and elite politics, but also with development. A redefinition of ‘security’ was required by the near-disappearance of conventional military threats to the major powers and by an increasing awareness of the costs of the political economy of the new wars, both for affected countries and internationally. The events of 11 September have further reinforced the link between assistance and security issues.

Third, the UN is the leading contractor, even if many non-governmental organisations (NGOs) are very active in this area. Over the past two decades, the rate of increase in the size and complexity of NGOs working in the humanitarian field has been constant. UNHCR notes that in the 1960s, between 10 and 20 NGO partners were implementing the organization’s work. By the 1990s, this figure had
risen to several hundred. This project has focused its attention on UN contracts, but it is evident that many other possibilities for chartering humanitarian flights can be considered.

Fourth, the analysis of the operational characteristics of humanitarian flights reveals a very demanding operational scenario and some very important safety issues, owing to the dangerous environment for aircraft, as well the lack of any assistance, either from the point of view of air traffic control or ground support. Dedicated aircraft must be used for these particular operations and it is clear that aircraft of military origin are those best suited.

Fifth, owing mainly to the economic constraints imposed by the UN and NGOs when awarding contracts, humanitarian flight operators do not address safety issues properly. Only aircraft offered at a low hourly cost have the chance of winning a Call for Tender. Moreover, the market is dominated by Third World and Russian operators who are able to offer aircraft at significantly lower prices than any other Western operator. The UN has issued Aviation Standards with well-defined Aircraft Operator Requirements.

These address the following areas:

- Crew Training (including Dangerous Goods, Security and CRM)
- Quality System
- Maintenance requirements
- Security management
- Flight planning, etc.

Many operators clearly fail to comply with these requirements even if, ironically, they probably meet them, albeit from a formal point of view.

Within the UN, safety concerns have increased considerably over the last two years. Increasingly, safety officers and safety statistics occupy a prominent
profile in the overall framework, although the effective adherence of charter operators to the Aircraft Operators Requirements is still far from being fully implemented.

The correct implementation of safety standards results in higher operating costs to the operator. If operators comply with the applicable Aviation Standards, this should be reflected by higher price offers to the UN Invitations to Bid, whilst the UN for its part should be ready to pay a higher price for the guarantee of operational safety.

Within this framework, it is considered feasible to start up a small operation with the following characteristics:

- Area of operations: Sudan. The UN is deploying a massive peacekeeping operation in support of the armistice signed between the Northern and Southern sides and of course the presence of very rich oil fields has added additional impetus. The UN estimates the need for at least 40 aircraft in Sudan for the period 2004-2005, in addition to the already existing fleet operating under the auspices of Operation Lifeline Sudan (OLS).

- Aircraft: CASA 212. Its ability to take off and land from very short runways or airfields, together with the capacity to carry small jeeps or any cargo or even up to 19 passengers, make it one of the aircraft best suited for Sudanese operations in the years to come.

- AOC: The aircraft will operate initially under a JAR-OPS AOC. If operations with a JAR-OPS AOC prove to be impractical because of economic constraints and a very competitive market, the aircraft will be put under an East African AOC.

The economic plan shows that revenue margins exist and there is great potential for an operation conducted in a sector currently experiencing a rising demand for dedicated air transport.

Once operations have been put in place, possible developments are:
- The chance of increasing the number of aircraft contracted to the
- The chance of contracting other NGOs active in the country
- The chance of contracting oil companies, whose number will increase as soon as the UN operation in Sudan is in place.

These developments, together with the need for limited investment and, where there are difficulties in implementing some aspects of the operation, the chance of using aircraft in the African tourist market, make this project a reasonably safe and successfully experience.
ANNEX 1

Performance analysis of the most used aircraft in Humanitarian Operations
LOCKHEED L-100

TYPE
Medium range freighter

HISTORY
Lockheed's L-100 freighters are the civil equivalents of the venerable military C-130 Hercules, and have proven to be of great utility, particularly in undeveloped countries.

Lockheed initiated design of the Hercules in response to a 1951 US Air Force requirement for a turboprop-powered freighter. This resulted in the C-130 Hercules, which first flew in prototype form on August 23 1954. Design features included the high mounted wing, four Allison 501/T56 turboprops and the rear-loading freight ramp. The USAF ordered the
C-130 into series production in September 1952 and since that time more than 2,500 have been built.

The C-130’s appeal to freight operators encouraged Lockheed to develop a civil version. The first commercial versions were based on the C-130E model and a demilitarised demonstrator first flew in April 1964. This initial civil development, the L-100 (L-382), was awarded civil certification in February 1965.

This model was soon followed by the L-100 (L-382B) series which introduced an improved freight-handling system. Sales of these initial versions were slow, leading Lockheed to develop the 2.54m (8ft 4in) stretched L-100-20 (L-382E), which offered better freight capacity and operating economics.

The L-100-20 was certified in October 1968, but was soon followed by the even longer L-100-30 (L-382G). The -30 was 2.03m (6ft 8in) longer than the -20, first flew in August 1970, and was delivered in December that year. Most civil sales of the Hercules have featured the L-100-30 variant.

Although basically a civil aircraft, several L-100s are in service with military operators, e.g. in Algeria, Gabon and Kuwait. The last L-100 was built in 1992, while the last military Allison 501/T56-powered C-130 was delivered in 1996.

Had Lockheed Martin not chosen to focus on military variants in 2000, leading to the cessation of the L-100J programme, the latter would have appeared as a commercial derivative of the new generation C-130J Hercules II, based on the stretched fuselage C-130J-30.

Improvements would have included new 3425kW (4591shp) Rolls-Royce (Allison) AE-2100D3 advanced turboprop engines, driving six blade props and also featuring two crew EFIS flight decks and significantly lower maintenance and operating costs. The C-130J first
flew on April 5 1996, while US FAA civil certification was awarded in September 1998.

POWERPLANTS
L-100-30 - four 3,362kW (4,508shp) Allison 501-D22A turboprops driving four-blade, constant-speed propellers.

PERFORMANCE
L-100-30 – max. cruising speed 571km/h (308kt); range with max. payload 2,472km (1,334nm); range with no payload 8,950km (4,830nm).

WEIGHTS
L-100-30 - operating empty 35,260kg (77,736lbs); max. take-off, 70,310kg (155,000lbs).

DIMENSIONS
L-100-30 – wingspan 40.41m (132ft 7in); length 34.37m (112ft 9in)

CAPACITY
L-100-30 – flight crew of three or four; max payload of 23,158kg (51,054lbs) comprising pallets or containers.

PRODUCTION
Total number of L-100s built 114 (incl. 22 L-100s, 27 L-100-20s and 65 L-100-30s).
HISTORY

Built firstly by Hawker Siddeley and then British Aerospace, the rugged HS.748 began life when Avro sought to re-enter the civil market in the 1950s in anticipation of a decline in its military aircraft business.

The HS.748 proved to be reasonably successful sales wise and remains popular in Third World nations. Surfacing as the Avro 748 in 1958, Hawker Siddeley took over the 748 design in 1959 (Avro being a part of the Hawker Siddeley Group). The new aircraft made a successful maiden flight on June 24, 1960 and four prototype aircraft (two for static testing) were built. The first production Series 1 flew on August 30, 1961.

Series 1 production aircraft were powered by two 1400kW (1880ehp) Dart RDa.6 Mk 514 turboprops and first entered service in December
1961 with Skyways Airways. Only 18 Series 1s were built, however, as by that time the improved Series 2 was already flying.

The Series 2, in its 2, 2A and 2C variants, was the most successful of the line, the first flying on November 6 1961. The Series 2 differed from Series 1, weighing more and using more powerful engines. The Series 2B appeared in 1977, offering a range of aerodynamic and other improvements, including an increased wingspan.

The most advanced variant of the 748 to appear was the Super 748. It made its first flight in July 1984. Incorporating the improvements of the 2B, it also featured a modernised flight deck, improved efficiency, hush-kitted Dart engines and new galley and internal fittings. Production ended in 1988. Today the 748 remains popular with charter and freight operators.

**POWERPLANTS**

Srs 2A - two 1,700kW (2,280ehp) Rolls-Royce Dart RDa.7 Mk 5342 or Mk 5352 turboprops driving four-blade propellers. Super 748 - two 1700kW (2,280ehp) Dart Mk 5522s.

**PERFORMANCE**

Srs 2A - cruising speed 452km/h (244kt); range with max. payload and reserves 1,360km (735nm); range with max. fuel and reserves 3,130km (1,690nm). Super 748 - cruising speed 452km/h (244kt); max. initial rate of climb 1,420ft/min; range with max. payload and reserves 1,715km (926nm); range with max. fuel 3,360kg (7,800lbs) payload and reserves 2,892km (1,560nm).

**WEIGHTS**

Srs 2A - operating empty 12,159kg (26,806lbs); max. take-off 21,092kg (46,500lbs). Super 748 - empty 6,676kg (14,720lbs); max. take-off 12,430kg (27,400lbs).
DIMENSIONS
Srs 2A - wingspan 30.02m (98ft 6in); length 20.42m (67ft 0in); height 7.57m (24ft 10in); wing area 75.4 sq m (810.8sq ft). Super 748 - same except for wingspan 31.23m (102ft 6in); wing area 77.0sq m (828.9sq ft).

CAPACITY
Flight crew of two. Typical seating for between 48 and 51 passengers, at four abreast and 76cm (30in) pitch.

PRODUCTION
Production ended in 1988 by which time 382 had been built, including 160 assembled in India, comprising mostly Series 2s. About 180 were in commercial use in 1998.
HISTORY
The Shorts 330, or the `Shed' as at least one regional airline affectionately dubbed it, is an inexpensive and reliable 30-seat airliner, if somewhat slower than most of its pressurised competitors.

The Shorts 330 is a stretched development of the SC.7 Skyvan. Beginning life as the SD330, the 330 retained the Skyvan's overall configuration, including the slab-sided fuselage cross-section, supercritical, braced, above-fuselage-mounted wing design (lengthened by 2.97m/9ft 9in) and twin tails. Compared with the Skyvan, though, the fuselage is lengthier by 3.78m (12ft 5in), allowing seating for over ten more passengers. Improved performance over the fairly slow Skyvan results from two Pratt & Whitney PT6A turboprops driving five-blade props, pointed nose and retractable undercarriage. More than 60% greater fuel capacity boosts its range significantly over that of the Skyvan.
An engineering prototype of the 330 flew for the first time on August 22, 1974, while a production prototype flew on July 8, 1975. The first true production aircraft followed that December. The 330 entered airline service with Time Air of Canada in August 1976.

Initially, Shorts 330s were powered by PT6A45As and 45Bs and were known as 330100s, while the definitive 330-200s feature more powerful PT6A45Rs. The 200s also feature a number of detailed improvements, while items previously available as options were later offered as standard features.

Various freighter versions of the 330 have been developed, including the Sherpa with a rear-loading ramp (in service with the US Air Force and Army as the C23) and the military 330UT.

**POWERPLANTS**
330100 - two 875kW (1,173shp) Pratt & Whitney Canada PT6A45 turboprops driving five-blade constant speed Hartzell propellers.
330200 - two 893kW (1,198shp) PT6A45Rs.

**PERFORMANCE**
330100 – max. cruising speed 356km/h (192kt), long-range cruising speed 296km/h (160kt); initial rate of climb 1,200ft/min; range with 30 passengers and reserves 590km (320nm). 330200 – max. cruising speed 352km/h (190kt); long-range cruising speed 294km/h (159kt); range with max. payload 660km (473nm); range with max. fuel and no reserves 1,695km (915nm).

**WEIGHTS**
330100 - empty equipped in airliner configuration 6,577kg (14,500lbs); max. take-off 10,160kg (22,400lbs). 330200 - operating empty 6,697kg (14,764lbs); max. take-off 10,387kg (22,900lbs).
DIMENSIONS
Wingspan 22.76m (74ft 8in); length 17.69m (58ft 1in); height 4.95m (16ft 3in); wing area 42.1sq m (453.0sq ft).

CAPACITY
Flight crew of two. Typical passenger accommodation for 30 at 3 abreast and 76cm (30in) pitch in 10 rows of seats. In combi-freight/passenger configuration the 330 houses freight in the front of the cabin and 18 passengers in the rear.

PRODUCTION
330 production wound up in September 1992 after 136 had been built, including military C23 Sherpas and 330UTs. Approximately 35 were in airline service in late 1998.
CASA 212

HISTORY
Initially conceived as a light STOL transport for the Spanish Air Force, the CASA C212 has found a handy market niche and is highly regarded for its utility in underdeveloped regions.

Designed to replace the Spanish Air Force's mixed transport fleet of Douglas C47 Dakotas, CASA Azors and Junkers Ju 52s still in service in the 1960s, the C212 was also developed with the intention of offering a civil variant. Design work began in the late 1960s and the first prototype made its initial flight in March 26 1971. Pre-production examples followed and then the type entered air force service in 1974. The first commercial version was delivered in July 1975.

The basic civil version was designated the C212C, the military version, the C2125. Production of these models ceased in 1978, when CASA switched to the Series 200 with more powerful engines and higher operating weights. The initial Series 200, a converted C212C prototype, flew for the first time in its new configuration on April 30 1978. A third development of the Aviocar was the Series 300 which first flew in 1984 and was certified in late 1987. Improvements to this model are newer engines and winglets.
The latest development is the C212-400, which was launched at the 1997 Paris Air Show (after its first flight on April 4 that year). It features TPE331-12JR engines which maintain their power output at a higher altitude for improved ‘hot and high’ performance, and an EFIS flight deck.

POWERPLANTS
C212C - two 580kW (775shp) Garrett Aireshare (now Allied Signal) TPE3315251C turboprop engines, driving four-blade propellers.
Series 300 - Two 670kW (900shp) TPE33110R513Cs.

PERFORMANCE
C212C – max. speed 370km/h (200kt); max. cruising speed 359km/h (194kt); economical cruising speed 315km/h (170kt); range with max. fuel and 1,045kg (2,303lbs) payload 1,760km (950nm); range with max. payload 480km (258nm).

Series 300 – max. operating speed 370km/h (200kt); max. cruising speed 354km/h (191kt); economical cruising speed 300km/h (162kt); range with 25 passengers and reserves at max. cruising speed 440km (237nm) - with 1,700kg (3770lbs) payload 1435km (775nm).

WEIGHTS
C212C - empty 3,700kg (8,157lbs), max. take-off 6,300kg (13,890lbs). Series 300 - empty 3,780kg (8,333lbs); operating empty 4,560kg (10,053lb); max. take-off 7,700kg (16,975lbs).

DIMENSIONS
C212C & Series 200 - wingspan 19.00m (62ft 4in), length 15.20m (49ft 11in), height 6.30m (20ft 8in); wing area 40.0sq m (430.6sq ft).
Series 300 - wingspan 20.28m (66ft 7in); length 16.15m (53ft 0in); height 6.60m (21ft 8in); wing area 41.0sq m (441.3sq ft).
CAPACITY
Flight crew of two; max. passenger seating for 26, typical layout for 22 passengers (3 abreast). Freighter version can accommodate three LD3 containers or two LD2s or two LD727/DC-8s; max. payload 2,700kg (5,950lbs).

PRODUCTION
Over 435 Aviocars of all models built, including 170 for commercial operators and 265 for military customers. IPTN in Indonesia has built over 90 NC212s under licence.
DHC 6 TWIN HOTTER

TYPE
STOL turboprop regional airliner and utility transport.

HISTORY
Still Canada’s most successful commercial aircraft programme with more than 800 built, the Twin Otter remains popular for its rugged construction and useful STOL performance.

Development of the Twin Otter dates back to January 1964 when De Havilland Canada started design work on a new STOL twin turboprop commuter airliner (seating between 13 and 18) and utility transport.
The new aircraft was designated the DHC-6 and prototype construction began in November that year, culminating in the type’s first flight on May 20 1965. After receiving certification in mid-1966, the first Twin Otter entered service with long-term De Havilland Canada supporter, the Ontario Department of Lands in Canada. The first production aircraft were Series 100s.

Design features included double-slotted, trailing-edge flaps and ailerons that could act in unison to boost STOL performance. Compared with the later Series 200s and 300s, the 100s are distinguishable by their shorter, blunter noses.

The main addition to the Series 200, which was introduced in April 1968, was the extended nose, which, together with a reconfigured storage compartment in the rear cabin, greatly increased baggage stowage area.

The Series 300 was introduced from the 231st production aircraft in 1969.
It too featured the lengthened nose but also introduced more powerful engines, thus allowing a 450kg (1000lbs) increase in take-off weight. It also boasted a 20-seat interior. Production ceased in late 1988.

In addition, six 300s with enhanced STOL performance (DHC-6-300s) were built in the mid-1970s.

**POWERPLANTS**
100 – two 431kw (578shp) Pratt & Whitney Canada (formerly United Aircraft of Canada) PT6A-20 turboprops driving three-blade propellers.
300 – two 460kw (620shp) P&WC PT6A – 27s.

**PERFORMANCE**
100 – max. cruising speed 297 km/h (165 kts); range with max. payload 1,427 km (771nm); range with 975kg (2,150lbs) payload 1,344km (727nm).
300 – max. cruising speed 338 km/h (182 kts); initial rate of climb 1,600 ft/min; range with 1,135 kg (2,500lbs) payload 1,297km (700nm); range with an 860kg (1,900lbs) payload and wing tanks 1,705km (920 nm).

**WEIGHTS**

100 – basic operating empty 2,653kg (5,850lbs); max. take-off 4763kg (10,500lbs).

300 – operating empty 3,363kg (7,415lbs); max. take-off 5,670kg (12,500lbs).

**DIMENSIONS**

100 – wingspan 19.81m (65ft 0in); length 15.09m (49ft 6in), height 5.94m (19ft 6in); wing area 39.0 sq m (420sq ft).

300 – same except for length 15.77m (51ft 9in) or 15.09m (49ft 6in) for floatplane variants.

**CAPACITY**

Flight crew of two standard regional airliner interior seats at three abreast and 76 cm (30in) pitch.

Can be configured as an executive transport, freighter, aerial ambulance and survey aircraft.

**PRODUCTION**

Production completed in 1988 and comprised 115 Series 100s, 115 Series 200s and 614 Series 300s.
CESSNA CARAVAN

TYPE
Single turboprop utility transport.

HISTORY
With sales exceeding the 1000 mark, the useful Caravan is a popular utility workhorse worldwide.

Design work for the Caravan dates back to the early 'eighties. The first prototype flight occurred on December 9 1982 and certification was granted in October 1984. When production began the following year, the Caravan became the first all-new, single-engine turboprop-powered aircraft to achieve production status.
The Caravan I has had a close association with US package-freight specialist Federal Express (FedEx), at whose request Cessna specially developed two pure freight versions. The first of these was the 208A Cargomaster (40 delivered), the second was the stretched 208B Super Cargomaster (260 delivered).

The first Super Cargomaster flew in 1986 and featured a 1.22m (4ft) stretch and greater payload capacity, including an under-fuselage cargo pannier. FedEx's aircraft lack cabin windows.

The 208B Grand Caravan first flew in 1990 and like the Super Cargomaster was a stretched version of the basic Caravan, powered by a 505kW (675shp) PT6A-114. It can seat up to 14 passengers.

Announced at the 1997 NBAA convention, the 208-675 has replaced the basic 208. It combines the standard length airframe of the 208 with the more powerful PT6A-114 of the 208B.

Underbelly cargo pods, floats and skis are offered as options on the Caravan I family, and the type is easily converted from freight to passenger configurations. A military/special missions version of the 208A, dubbed the U-27A, is also on offer. The Brazilian Air Force designation is C-98.

Soloy is offering a dual-engine conversion of the 208B, named Pathfinder 21. This version is powered by a 991kW (1,329shp) Pratt & Whitney Canada/Soloy Dual Pac power plant, consisting of two PT6D-114A engines driving a single propeller. Other distinguishing features of the Pathfinder 21 include a 72in cabin stretch behind the wing and a large integral cargo pod.

**POWERPLANTS**

208 - one 450kW (600shp) Pratt & Whitney Canada PT6A-114 turboprop driving a three-blade variable pitch Hartzell propeller. 208-
675, 208B Super Cargomaster & Grand Caravan - one 505kW (675shp) PT6A-114A.

**PERFORMANCE**

208A – max. cruising speed 340km/h (184kt); initial climbing rate 1,215ft/min; range with max. fuel and reserves 1,797km (970nm), range with max. fuel and reserves 2066km (1115nm).

208B Super Cargomaster – max. cruising speed 317km/h (171kt); max. initial rate of climb 770ft/min; range with max. fuel and reserves 2,000km (1080nm).

Grand Caravan – max. cruising speed 337km/h (182kt); max. initial rate of climb 975ft/min; range with max. fuel and reserves 1,667km (900nm).

**WEIGHT**

208A - empty 1,725kg (3,800lbs); max. take-off 3,310kg (7,300lbs).

208B Super Cargomaster - empty 2,073kg (4,570lbs); max. take-off 3,970kg (8,750lbs).

Grand Caravan - empty equipped 2,250kg (4,965lbs), max. take-off 3,970kg (8,750lbs).

**DIMENSIONS**

208A - wingspan 15.88m (52ft 1in); length 11.46m (37ft 7in); height 4.32m (14ft 2in); wing area 26.0sq m (279.4sq ft).

208B – same, except for length 12.67m (41ft 7in).

**CAPACITY**

208A - Pilot and typically 9 passengers, or up to 14 with an FAA FAR Part 23 waiver. Cargo capacity 1360kg (3000lbs).

208B - Passenger accommodation same. Cargo capacity for 1587kg (3500lbs).

Grand Caravan - one pilot and up to 14 passengers.
PRODUCTION
1000th unit delivered in October 1998. More than 60% of production sold outside the USA.
BEECHCRAFT
KING AIR 200

TYPE
Turboprop passengers transport

HISTORY
The King Air 200 is a continuation of the King Airline, with new features including the distinctive tail, more powerful engines, greater wing area and span, increased cabin pressurisation, greater fuel capacity and higher operating weights than the King Air 100.

Beech began design work on the Super King Air 200 in October 1970, culminating in the type's first flight on October 27 1972. Certified in mid-December 1973, the King Air 200 went on to be the most successful aircraft in its class, eclipsing such rivals as the Cessna
Conquest and Piper Cheyenne. Today, the King Air 200 is the only one of the three in production.

The improved B200 entered production in May 1980. This version features more efficient PT6A42 engines, increased zero fuel max. weight and increased cabin pressurisation. Sub-variants include the B200C with a 1.32m x 1.32m (4ft 4in x 4ft 4in) cargo door, the B200T with removable tip tanks and the B200CT with tip tanks and cargo door. The Special Edition B200SE was certified in October 1995 and features an EFIS avionics suite as standard.

Various special mission King Air 200s and B200s have been built, including those for calibration, maritime patrol and exploration purposes. In addition, several hundred Super King Airs have been built for the US military under the designation C12.

The 1500th commercial King Air 200 was built in 1995. In 1996 Raytheon dropped the ‘Super’ prefix for all 200, 300 and 350 model King Airs.

**POWERPLANTS**

200 - two 635kW (850shp) Pratt & Whitney Canada PT6A41 turboprops driving three-blade, constant-speed propellers. B200 - two 635kW (850shp) P&WC PT6A42s.

**PERFORMANCE**

200 – max. speed 536km/h (289kt), max. cruising speed 515km/h (278kt). Initial rate of climb 2,450ft/min.

Range with reserves at max. cruising speed 3254km (1757nm), at economical cruising speed 3495km (1887nm).

B200 – max. speed 536km/h (289kt), economical cruising speed 523km/h (282kt). Initial rate of climb 2450ft/min.

Range with max. fuel and reserves 3,658km (1974nm) at 31,000ft and economical cruising speed.
WEIGHT
200 - empty 3318kg (7315lbs); max. take-off 5670kg (12,500lbs).
B200 - empty 3675kg (8102lbs); max. take-off 5670kg (12,500lbs).

DIMENSIONS
Wingspan 16.61m (54ft 6in); length 13.34m (43ft 9in), height 4.57m
(15ft 0in); wing area 28.2sq m (303.0sq ft).

CAPACITY
Flight crew of one or two. Accommodation for a maximum of 13
passengers in main cabin, plus a further passenger beside the pilot on
flight deck. Typical corporate seating layout for six in main cabin.

PRODUCTION
Over 1700 King Air 200s have been delivered to civil and commercial
customers, while over 400 have been delivered to military forces.
TYPE
Turboprop passengers transport

HISTORY
The Beech 1900 19-seat commuter was chosen along with the smaller 1300 (both developments of the King Air 200) and the C99 for Beech's re-entry into the regional airliner market in 1979.

The most obvious change from the King Air 200 to the 1900C is the substantially lengthened fuselage (17.63m/57ft 10in compared to
13.34m/43ft 9in). Other changes include more powerful engines, a modified tail with tailets, and stabilons on the lower rear fuselage.

Development of the 1900 commenced in 1979 and the first flight occurred on September 3 1982. US FAA certification was awarded in November 1983, prior to the 1900C's entry into service in February the following year. The first ExecLiner corporate transport version was delivered in mid-1985.

During the course of 1900C production, a wet wing was introduced increasing fuel capacity by 927L (204Imp gal/245US gal), while military transport, maritime patrol and electronic surveillance versions were also offered.

Beech announced the improved 1900D at the US Regional Airlines Association meeting in 1989, with the prototype, a converted 1900C, first flying on March 1 1990. Production switched to the improved model in 1991, with first deliveries (to Mesa Air) being made that November. The main change introduced on the 1900D was the substantially deeper fuselage with stand-up headroom.

In addition it also introduced larger passenger and freight doors and windows, twin ventral strakes and auxiliary horizontal fixed tails, while more powerful engines and winglets improved ‘hot and high’ performance.

The 1900D has sold particularly well. For example, the 1900D's biggest customer is Mesa Airlines, a United Airlines feeder, which has placed total firm orders for 118. A 1900D delivered to Impulse Airlines in Australia in March 1997 was the 500th 1900 built.

**POWERPLANTS**

1900C - two 820kW (1100shp) Pratt & Whitney Canada PT6A65B turboprops driving four-blade, constant-speed Hartzell propellers.

1900D - two 955kW (1280shp) P&WC PT6A67D turboprops.
PERFORMANCE
1900C – max. cruising speed 495km/h (267kt).
Range with 10pax at long-range cruising speed with reserves 2907km (1570nm).
1900D – max. cruising speed 533km/h (288kt).
Range with 10pax and reserves at long-range cruising speed 2776km (1498nm).

WEIGHTS
1900C - empty 4327kg (9540lbs); max. take-off 7530kg (16,600lbs).
1900D - typical empty 4831kg (10,650lbs); max. take-off 7688kg (17,120lbs).

DIMENSIONS
1900C - wingspan 16.60m (54ft 6in), length 17.63m (57ft 10in),
height 4.54m (14ft 11in); wing area 28.2sq m (303sq ft). 1900D -
wingspan (over winglets) 17.67m (58ft 0in); length 17.63m (57ft 10in),
height 4.72m (15ft 6in); wing area 28.8sq m (310.0sq ft).

CAPACITY
Flight crew of two. Standard passenger accommodation for 19 (2 abreast). ExecLiner configurations range for between 10 to 18,
depending on customer requirements.

PRODUCTION
207 civil Beech 1900Cs were built when production ended. More than
300 1900Ds had been ordered at the time of writing.
ANNEX 2

UN Bid Schedule
from 20th February to 24th March
2004
Bid Schedule from 20 February 2004 to 24 March 2004

### Air Charter

<table>
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<tr>
<th>Bid No</th>
<th>Subject</th>
<th>Opening Date</th>
<th>Opening Time</th>
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<tbody>
<tr>
<td>ITBS-939</td>
<td>Four multi engine medium utility helicopters plus four optional ones for one year plus one optional year, Sierra Leone</td>
<td>20 Feb 2004</td>
<td>11:00 AM</td>
</tr>
<tr>
<td>ITBS-931</td>
<td>Rotation/Deployment of Various Contingents between Pakistan, Cairo and Kosovo and Uruguay and DRC (3 - 28 April 2004)</td>
<td>24 Feb 2004</td>
<td>3:00 PM</td>
</tr>
<tr>
<td>ITBS-943</td>
<td>Air transport for the rotation of Kenyan Military Contingent Personnel between Nairobi and Asseb in March '04</td>
<td>25 Feb 2004</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>ITBS-937</td>
<td>Air transportation for the rotation of Nepalese Personnel between Kathmandu, Nepal and Entebbe, Uganda in April '04</td>
<td>1 Mar 2004</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>ITBS-942</td>
<td>1 MULTI ENGINE HEAVY LIFT UTILITY HELICOPTER FOR UNAMSIL, SIERRA LEONE</td>
<td>1 Mar 2004</td>
<td>4:00 PM</td>
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<tr>
<td>ITBS-1254</td>
<td>AIRFIELD LANDING LIGHTING SYSTEM - Callis -</td>
<td>16 Mar 2004</td>
<td>11:00 AM</td>
</tr>
<tr>
<td>RTPS-594</td>
<td>ONLINE AVIATION SAFETY TRAINING MODULES</td>
<td>15 Mar 2004</td>
<td>11:00 AM</td>
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### Communications Equipment

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<tr>
<td>ITBG-1257</td>
<td>Inverter and VS 4000 System</td>
<td>26 Feb 2004</td>
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### EDP Equipment

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<tr>
<td>ITBG-1252</td>
<td>Studio Video Editing Equipment</td>
<td>27 Feb 2004</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>ITBG-1263</td>
<td>IT and Miscellaneous Computer Accessories</td>
<td>1 Mar 2004</td>
<td>3:00 PM</td>
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<tr>
<td>ITBG-1261</td>
<td>Computer Servers</td>
<td>25 Feb 2004</td>
<td>11:00 AM</td>
</tr>
<tr>
<td>ITBG-1256</td>
<td>Blackberry (or Equivalent) Devices</td>
<td>20 Feb 2004</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>ITBG-1258</td>
<td>HP TAPL LIBRARY WITH MAINTENANCE</td>
<td>23 Feb 2004</td>
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### Freight Forwarding

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<td>ITBS-938</td>
<td>Shipment of 42 Vehicles from Nagoya, Japan to Brescia, Italy</td>
<td>26 Feb 2004</td>
<td>3:00 PM</td>
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<tr>
<td>ITBS-940</td>
<td>Shipment of 100 Vehicles to Monrovia, Liberia and 453 Vehicles to Brescia, Italy</td>
<td>1 Mar 2004</td>
<td>11:00 AM</td>
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<tr>
<td>ITBS-944</td>
<td>Shipment of 8 Containerized Water Storage Systems from Singapore to Kinshasa</td>
<td>4 Mar 2004</td>
<td>11:00 AM</td>
</tr>
</tbody>
</table>
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Website: http://www.airserv.org/

CARE
Website: http://www.care.org/

CARITAS
Website: http://www.caritas.org/

CATHOLIC RELIEF SERVICES
Website: http://www.catholicrelief.org/

Disaster Preparedness and Emergency Response Association (DERA)
Website: http://www.disasters.org/desa/desa.htm

Food and Agriculture Organization (FAO)
Website: http://www.fao.org/

International Committee of the Red Cross (ICRC)
Website: http://www.icrc.org/

International Federation of Red Cross and Red Crescent Societies (IFRC)
Website: http://www.ifrc.org/

International Organization for Migration (IOM)
Website: http://www.iom.int

International Rescue Committee
Website: http://www.theIRC.org/

MEDAIR
Website: http://www.medair.org/

MEDECINS SANS FRONTIERES
Website: http://www.london.msf.org/

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Websites: http://www.reliefweb.int/ocha_ol/index.html

OXFAM International
Website: http://www.oxfam.org/

Pan American Health Organization (PAHO)
Website: http://www.paho.org/disasters

SAVE THE CHILDREN
Website: http://www.savethechildren.org.uk/

SWISS AGENCY FOR DEVELOPMENT AND COOPERATION
Website: http://web.mit.edu/urbanupgrading/upgrading/resources/organizations/sdc.html

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Website: http://www.un.org

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Website: http://www.unicef.org/

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AVIATION ASSISTANCE
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