

OFFICE FOR THE COORDINATOR OF HUMANITARIAN AFFAIRS

FEDERATED STATES OF MICRONESIA

TYPHOON LUPIT

26 November 2003

United Nations Disaster Assessment and Coordination

UNDAC

MISSION REPORT

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3-16 December 2003



United Nations

UNDAC Mission to FSM, 3-14 December 2003

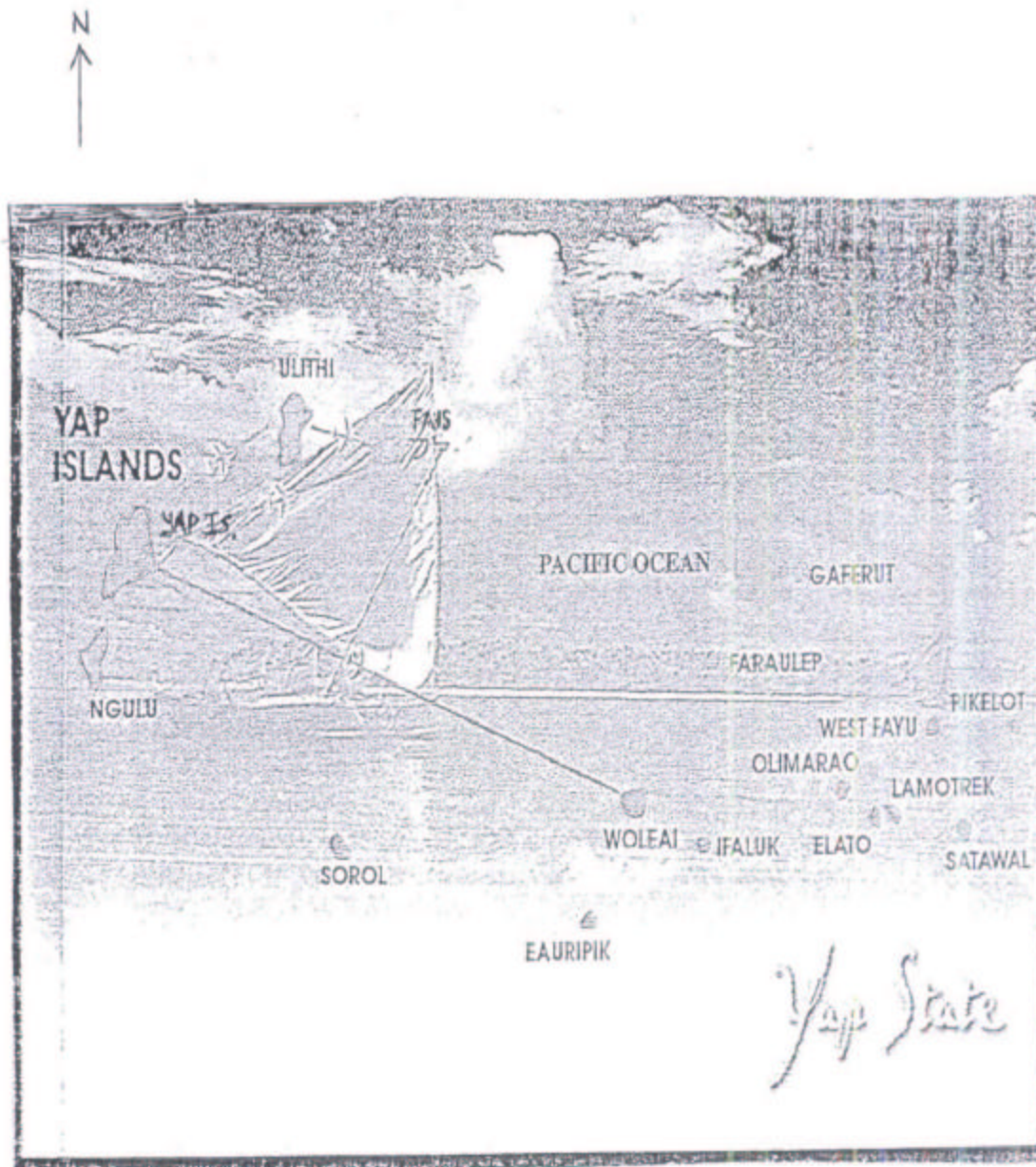
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Map of the States of Yap, FSM



Courtesy of the "Visitor's Guide Map. The Island's of Yap"
Yap Visitor's Bureau

UNDAC MISSION SUMMARY

Typhoon LUPIT

3-14 December 2003

Disaster event: On 21 Nov 03, Tropical Storm LUPIT passed through Chuuk State of Federated States of Micronesia (FSM). It was upgraded to Typhoon LUPIT on 23 Nov, and then passed through Yap State on 25 Nov with sustained winds of 194 km/h and gusts of 240km/h. The strong winds, heavy rains and hazardous waves caused severe damage to public, private and commercial facilities and agriculture resources.

Date & time: 25 Nov 03, from around 4-11 am.

Location: All the islands in the State of Yap group were affected to varying degrees.

Main effects: Fortunately there were no casualties although the shortage of potable water caused widespread gastro-intestinal problems, especially diarrhoea, in young and old alike. Storm surge decimated many of the islands' larger taro plantations, seriously impacting the normal diet of the islanders, a situation that is estimated to last for up to 4 months whilst taro and other crops regenerate. High winds impacted heavily on traditional thatched houses in villages as well as on government infrastructure such as coastal roads, seawalls, government buildings, and public utilities, where they existed.

Appeals for Assistance: A state of emergency was declared for Yap on 26 Nov for a period of 30 days. OCHA was approached to mobilize a UNDAC team to Yap on 1 Dec, and subsequently three UNDAC team members arrived in Yap on 3 and 4 Dec 03. They immediately commenced rapid assessments in the affected islands.

UNDAC Team members:

- Ms. Georgina Bonin (UNDAC Member, UNDP Apia, Samoa)
- Mr. Andrew Oaego (UNDAC Member, National Disaster Office, Port Moresby, PNG)
- Mr. James Dance (UNDAC Member, New Zealand Fire Service, Wellington, New Zealand)

Duration: 3-16 December 2003

Purpose of the mission: To assess the situation and obtain clear objective information about urgent needs following the typhoon, in order to determine requirements for international relief in Yap during the first phase of the emergency.

Significant Results:

- Evaluated requirements for international relief to the State of Yap.
- Identified possibilities for emergency grants from OCHA and UNDP.
- Made linkages with other sources of external assistance, such as SOPAC.
- Provided input to 4 OCHA situation reports on the disaster.

Debrief Points:

Strengths:

- Strong, experienced leadership and excellent teamwork;
- Relevant field and technical skills in the team, which was thus able to improvise, move quickly and efficiently, objectively assess the situation, and make impartial decisions;
- Rapid deployment and arrival in country;
- The Team was based in the designated disaster operations centre and had ready access to relevant information, contacts and resources;
- The Team had immediate funds to expend to cover its own logistical needs as well as contribute in real terms to the relief effort through the OCHA Emergency Grant, thereby increasing the level of credibility and legitimacy of the UN as a reliable partner at such times.

Opportunities:

- To encourage government to contemplate longer-term disaster preparedness as well as immediate relief needs (e.g. updating the disaster plan, conducting training, etc.);
- To revitalize dormant systems and linkages, (e.g. with the Micronesian Red Cross Society and IFRC, the desalination plant in YSPSC, and communications with the NDMO);
- To utilize the international appeal capability of the UN system, through OCHA;
- FSM is covered by UNDP office in Suva, Fiji, which has resources for disaster prevention, preparedness, and recovery programmes.

Constraints:

- No direct communication with the UN Resident Coordinator (RC) in Suva.

UNDAC MISSION REPORT

1 ACCOUNT OF THE MISSION

1.1 Purpose

The United Nations Disaster Assessment and Coordination (UNDAC) Team was deployed by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to conduct rapid field assessments of the impact of Typhoon LUPIT on the islands of the State of Yap, and to work with the State Government to provide appropriate and rapid assistance to the most affected populations. In doing so the Team had opportunities to inform the national and international communities of the situation and response capabilities in the islands.

1.2 Conduct

The Team mobilized on 1 December and arrived in Yap over 3 and 4 December 2003. Following briefings with the disaster coordinator, it commenced immediately with meetings and conducting rapid damage assessments over the ensuing 3 days. From the start the UNDAC mission established its base with the Director of the Office of Planning and Budget (OPB) and were availed full access to office space, equipment, personnel and administrative support, which enabled it to function effectively. The amount of time spent on meetings was well balanced with the time devoted to field assessments, setting up the coordination centre, report writing, and communications with headquarters. The Team is indebted to the Director and staff of OPB for their gracious support.

1.3 Results

- (i) A Mission Action Plan was formulated in the first few days of the Team's arrival based on Standard UNDAC Mission Terms of Reference (see Annex A) and the perceived needs, in consultation with the Director of OPB/Disaster Coordination Office (DCO). The plan focused assistance on: (a) strengthening the aid coordination system; and (b) assessment and prioritization of disaster response operations and relief. Both objectives were fully achieved.
- (ii) Rapid assessments were carried out in Yap proper and Rumunga, Ulithi Atoll, Fais Atoll, and Woleai Atoll. Their purpose was to determine the immediate needs of the affected population for the first few days. At the same time, the State had deployed an eight member National Disaster Assessment Team to the outer islands to complete a thorough impact assessment of the damage by sector. The UNDAC assessments revealed that potable water was the most critical need in the short to medium term, due to the destruction of water supply infrastructure by high winds and storm surge. Given the seasonal weather transition to drought conditions, it was seen that the water shortages would be quickly exacerbated if the problems were not remedied. Also, damage to the local flora was extensive, affecting especially root and tree crops that are essential to local nutrition. Predictions of food shortage were a major concern given that the staple crops of taro, breadfruit, coconuts and fruit (bananas, papaya), had sustained 80-90% damage, and some would take at least 2 years to regenerate (e.g. breadfruit and coconuts).
- (iii) The Team was able to rapidly identify emergency needs for the utilization of the OCHA Emergency Grant (US\$10,000), comprising hand tools for clearing, rebuilding and re-cropping. This type of assistance was requested by several of the atoll communities visited by the Team and it was felt that the tools were

timely in boosting and maintaining the level of self-help that was evident in most of these communities. The items supplied included: 8 chainsaws, 10 pairs safety goggles, 10 pairs safety gloves, 32 wheelbarrows, 15 rakes, 35 hammers, 7 boxes roofing nails, 1,000 ties, 5 pickaxes, 35 shovels, and 400 packets of seeds (corn and squash).

- (iv) Formulas in the UNDAC Field Manual 2002 were used by the DCO to calculate the water and food rations purchased and shipped to the outer islands aboard the SS 'Micro Spirit', which sailed from Yap on 9 Dec 03.
- (v) Given the predisposition of the State of Yap and indeed, the whole FSM archipelago, to typhoons and other natural and man-made disasters each year, the Team noted the lack of preparedness of communities for typhoons as well as the relatively sluggish coordination of disaster response communications and operations between the State of Yap DCO in OPB, and the capital, Pohnpei. The Team formulated a proposal for disaster capability enhancement and resiliency building in communities through externally funded workshops. At the request of the Director of OPB, a further proposal for the review and re-vitalization of both the Yap State and FSM National Disaster Plans was formulated. These two proposals were combined in a single project and submitted to UNDP Suva for possible funding support. At the time of writing the Director of OPB was contacting the Department of Foreign Affairs in Pohnpei to generate an official request to UNDP to this effect. Also, both the Director and the UNDAC Team Leader met with Foreign Affairs at the end of the mission, to discuss the proposed project.
- (vi) The Team identified an option for meeting the drinking water needs of the outer islands following the typhoon. It transpired during meetings with the Yap State Public Services Corporation (YSPSC) that a Reverse Osmosis Desalination Plant is located on Ulithi Atoll. During previous droughts YSPSC has used this plant to produce water for distribution to the outer islands, utilizing funding from the Federal Emergency Management Agency (FEMA) that was sustained for 3 months. Costings carried out by the UNDAC Team in collaboration with YSPSC, show that the estimated cost to supply potable water to an outer-island population of 4,000 for 3 months would be around US\$35,000 (for 324 tons of potable water). UNDP has been contacted in order to investigate how the operation of this plant could be supported in the short and longer term.
- (vii) The Team established a well-accepted system in the DCO for data collection, tabulation, recording and dissemination to stakeholders. The daily briefing sessions with the Director of OPB allowed information to be shared and updated regularly and decisions to be made in a transparent fashion. These systems were praised by OPB and the Cabinet, which the Team briefed at a later stage, as being highly innovative and effective tools for the present and future disaster operations and coordination.

2 BACKGROUND INFORMATION

2.1 Federated States of Micronesia (FSM)

Through the 1986 Compact of Free Association, a mutually agreed 15-year pact was made between FSM and the former administrative power, USA, allowing the latter to establish bases and deny other nations access to Micronesia. In return, FSM received financial assistance averaging US\$100 million per year, which made up 100% of the country's GNP and, free access to the US in terms of migration and markets. By the end of the 15-year period it is estimated that, through the Compact, some US\$13.3 billion of direct compact monies would have been contributed to FSM in addition to millions in aid

funding¹. Despite this annual input of financial aid from the USA and other donor countries like Japan, unemployment remains relatively high and there is need for assistance for sustainable development. Only 10% of the population are wage earners whilst the majority of the population exists on a subsistence lifestyle in the outer islands without access to public services such as water and electricity. The staple crops are purchased rice and tinned fish and locally-grown breadfruit, banana and taro. People are highly dependent on external funding.

2.2 State of Yap, FSM

Yap is one of the four States of FSM and is made up of Yap proper, where the seat of government is located, plus eleven outer atolls and four single islands. Of these fifteen outer-island groups, eleven are populated. According to the latest population census (2000), the total population of Yap State is 12,000. Subsistence lifestyles predominate in the outer islands with crops like taro and breadfruit being the staples, supplemented by fish from the surrounding lagoons.

3 EMERGENCY SITUATION

3.1 Nature of the disaster

On 21 November 2003, Tropical Storm LUPIT passed through Chuuk State of Federated States of Micronesia (FSM). It continued to intensify and was upgraded to Typhoon LUPIT on 23 November, and then passed through Yap State of FSM on 25 November with sustained winds of 194 km/h and gusts of 240km/h. The strong winds, heavy rains and hazardous waves caused severe damage to public, private and commercial facilities and agricultural resources.

3.2 Area affected

In Yap State, the typhoon swept through the entire state from Satawal Island to northeast to main island of Yap. A thorough assessment of damages was commenced almost immediately by a State Disaster Assessment Team, which still continued 10 days after the first impact. Meanwhile FEMA conducted a preliminary assessment of damage during the first few days after the typhoon subsided, reporting damage to infrastructure amounting to US\$704,500. An UNDAC team also conducted rapid field assessments on five islands 3-5 December, reporting significant damage to agriculture and water supplies, which needed immediate attention. No casualties were reported. Yap proper and surrounding islands sustained little significant damage to infrastructure and, by and large, public services (water and electricity) were quickly restored, with no lasting impact on the population.

The outer-island groups of Ulithi, Fais, Woleai, and Ifaluk further east, however, suffered damage to dwellings, public infrastructure, and agriculture due to high winds and storm surge. Saltwater ingress was up to 500m inland, inundating taro plantations and destroying in excess of 80% of this vital staple crop for islanders. About 90% of the breadfruit on the islands has been lost and roughly 60% of coconut trees. The rejuvenation period for breadfruit and coconut is 1-2 years whilst taro will take some time, given the now high salt content of the soils. The damage to these staple crops has led to the introduction of a 3-month feeding programme to supplement the staple diet of the islanders, whilst debris clearing and re-cropping takes place.

¹ Galbriath, Kate. et al, 2000. Lonely Planet Series. Micronesia. p. 225.

Damage to water systems was pervasive, mainly due to contamination with saltwater from the storm surge and sea-spray. As some of the islands lie no more than 5m above sea level, the 10m high waves reached as far as 500m inland. Saltwater entered the water tanks and wells, making the water brackish and unfit for consumption.

3.3 Projected evolution/secondary effects

Women represent a significant portion of the island workforce in normal times and especially so during an emergency. They are primarily responsible for planting and harvesting crops including the highly valued staple, taro. Given the impact of saltwater damage on about 80% of the outer islands' taro crops, women were responsible for salvaging and preserving what they could from their plantations. According to all the women interviewed by the UNDAC Team, these supplies would last no more than a few weeks. It is felt that women would benefit from relevant disaster preparedness training and from being given appropriate tools to make their work easier and therefore more effective.

Cleaning out the groundwater wells will be a challenge over the next few months because of the lack of proper tools for the job. Given the likelihood of more typhoons in the future, it would be sensible to develop practical covering structures for the wells and the normal rainwater tanks supplied by roof guttering systems. These should be regularly inspected and kept in top working order at all times, and this responsibility needs to be clearly delegated by the village chiefs in conjunction with the relevant government departments.

4 IN-COUNTRY RESPONSE

4.1 Organization: state authorities

A state of emergency was declared for the State of Yap by the central government in Pohnpei immediately following Typhoon LUPIT, based on rapid assessments carried out by state disaster assessment teams. The Governor of Yap State designated the Director, OPB, as the disaster coordinator for all relief operations and coordination.

The Director was given full authority and powers by the State of Yap Governor and Cabinet to manage and coordinate the disaster response operations. During this period, and being relatively recently appointed to the directorship of OPB, the Director was constrained by the 1992 State Disaster Plan which unfortunately lacked relevancy to the operational procedures required to manage the Typhoon LUPIT emergency, given its outdated procedures and references. The Director immediately requested assistance from OCHA in the form of an UNDAC Team to assist in the assessment and coordination of response operations. As stated earlier, the Team was able to reach Yap soon after the request was transmitted.

4.2 Finance and administrative matters

At the national level, the President of FSM responded to the State Governor's appeal for assistance and, on 26 November 2003, declared that Yap was in a state of emergency for the next 30 days. The declaration obliged state-owned resources to provide emergency assistance, and to commence repair and replacement of all damaged or destroyed facilities, so far as they were able. The declaration also released state funding of US\$150,000 to support the preliminary response. The President activated a national emergency task force at cabinet level under the chairmanship of the Vice-President. This task force met during the week of the disaster and then its role was assumed by the State

DCO. The Department of Foreign Affairs in Pohnpei formulated the request for US assistance.

4.3 Assessment

At State level a National Disaster Assessment Team is currently visiting all the outer islands over a 2-week period to conduct in-depth disaster impact assessment. The State patrol boat, SS 'Island Voyager' was used to transport this eight-member team to the islands. The team has submitted daily reports to the Director of OPB by radio and, thus far, their assessments have confirmed the initial finding that water is the highest priority need, and food supplies are needed to supplement the staple diet of the island populations for about 3 months, until their crops regenerate.

4.4 Operations

The main operational constraints surround the repair and provisioning of the State owned inter-island ferry, SS 'Micro Spirit'. Water and food were transported to the main island of Yap and from there stevedoring of the 'Micro Spirit' was quickly expedited, but essential repairs to the secondary steering motor delayed her departure by 48 hours. She thus left Yap Port on 9 December 2003 on a 2-week voyage to deliver the first shipment of 632 tons of food (rice and cereals), and 34,000 litres of drinking water to the affected islands, unloading relief aid at each in turn.

4.5 Constraints

The major operational constraints were associated with the shortage of relief food and water within the State of Yap. Most of this relief food therefore had to be transported from Guam to the Port of Yap before it could be delivered to the affected islands.

5 INTERNATIONAL RESPONSE

5.1 Immediate Response

The immediate response from the international community came mainly from Guam. Guam industrial and commercial enterprises raised funds as a coalition, to supply emergency water and food relief. One of the concerns about this process was that it was not coordinated in any way by the disaster coordinator in Yap. Other support from the US military forces based in Guam was coordinated through Yap State Government and was delivered efficiently and effectively. All relief delivered in this manner had its transportation and distribution costs included, which is a major consideration given the distances required to transport relief supplies. Aerial drops of water proved to be unreliable and an alternative needs to be found.

5.2 Assistance from USA

The presence of a FEMA disaster assessment team prior to the impact of the typhoon is a measure of the success of the Compact between the FSM and the USA. It is also a measure of the effectiveness of the USA weather monitoring capability. The FEMA team undertook a rapid assessment process and then moved on to Chuuk State. This assessment was the basis for the submission to the US President for emergency relief amounting to around US\$750,000 and, at the time of writing, the State of Yap was awaiting the President's approval of a federal relief grant from USA.

5.3 Other donor assistance

The Micronesia Red Cross Society (MRCS) indicated that it would provide emergency household equipment from its disaster preparedness container located in Yap. Other significant donors were the Ayuda Foundation, Blue Sky Air, SOLCOM, Continental Air, Mobil Oil and the Government of Taiwan. Details of their individual contributions are not available at this time.

5.4 Coordination

Coordination of assistance and relief was difficult to track immediately post-typhoon. The UNDAC Team assisted the Director of OPB/Disaster Coordination to establish a system for tracking relief but this had only been partially implemented by the time the Team departed. Some international assistance was not made known to the UNDAC Team, or may have been coordinated outside the DCO.

5.5 Constraints

The main constraint for this UNDAC Team was the difficulty of integrating into a system that had been running for approximately 5 days at the time of their arrival in Yap. Rapid response by UNDAC teams is essential to permit smooth integration into national disaster management arrangements. The other main constraint was the difficulty of communication with the outer islands, and communicating externally from Yap to the outside world. E-mail was slow and difficult, especially when sending large amounts of data and attachments. The complexity of the governmental, cultural and social arrangements in FSM required considerable time and effort to understand and operate in effectively. The experience of two team members from Pacific Islands gave a sound foundation for the Team in this aspect of the mission.

6 ASSISTANCE

6.1 Priority needs

There are three priority needs for the outer island communities of the State of Yap. These are water, food and medical support to deal with the expected cases of diarrhoea arising from the water contamination. The UNDAC Team undertook a rapid assessment of the islands' needs and believes that the support from the State of Yap and from NGOs in Guam and elsewhere will be sufficient to meet the immediate needs. Through the UNDAC Team, OCHA has provided tools, building materials and seeds, directed to support the outer islands' own efforts towards rebuilding their communities. In the longer term a 3-month food and water supplementation programme is needed, and this has been jointly developed by the Director of OPB/Disaster Coordination and the UNDAC Team.

6.2 Safety

The community has not been impacted in terms of safety and security. On all the islands typhoon shelters were available and utilized effectively and, as a consequence, there were no reported injuries or casualties. In the longer term the UNDAC Team believes community safety can be improved during disasters through development of greater resilience and capability. The UNDAC Team has developed, in conjunction with the State of Yap, a capacity-development programme directed to this end.

6.3 Water and sanitation

Adequate safe water remains an immediate short term and intermediate term goal. Potable water to meet immediate needs is being supplied to the islands on board SS 'Micro Spirit', but the UNDAC Team has developed, in conjunction with the State of Yap, a proposal to produce freshwater *in situ* utilizing the existing Reverse Osmosis Plant located on Ulithi, at a cost-effective rate. The major cost of this project is the transportation and delivery component. It is expected that the FSM Government will submit the proposal to UNDP for funding.

6.4 Health

The major health concern is an increase in the number of reported cases of diarrhoea on the outer islands, resulting from people drinking contaminated water. Some minor losses to island dispensaries and medicines has exacerbated its impact, but it is anticipated that the outbreak will be controlled as freshwater becomes available.

6.5 Food and agriculture

The outer islanders live a subsistence life style. The loss or reduction in staple crop production will have an immediate deleterious effect on their quality of life. Recovery of the major staple crops will take at least 1 and perhaps 2 seasons, and so supplementary feeding is expected to be needed for at least 3-4 months. The islanders are undertaking recovery of all crops damaged by saltwater and have been provided with tools and seed by OCHA to assist in their recovery.

6.6 Household goods

The assessment teams observed some damage to household goods. UNDAC Team discussions with the Red Cross have confirmed the availability in Yap of a shipping container with disaster relief stocks including essential household items such as pots and pans, linen, and water containers. The Director of OPB/DCO has applied for the MRCS in Pohnpei to approve the release of these items to the affected communities.

6.7 Shelter

Typhoon damage to homes across the affected area is estimated to be in the vicinity of 30% to homes of contemporary construction and materials and 60% to traditional-style homes. These figures are not consistent but vary from island to island and have been detailed in the UNDAC Team's assessment. The communities have undertaken a significant repair programme and most of the reparable homes have already been repaired, although some traditional homes still need rebuilding. Observations indicate that all families have some form of shelter at this time.

6.8 Short to medium term

In the short term the relief arrangements relying on the single delivery of food and water by SS 'Micro Spirit' to the outer island communities will suffice. Funding for this short to medium term relief will come from the State of Yap disaster fund (of \$150,000). Guam-based NGOs have been forthcoming in their support and this will help to alleviate the immediate needs. It is believed that the FSM and Yap State Governments will find this relief programme sustainable in the short to medium term.

6.9 Medium term

In the medium term it is anticipated that the US President will support the FEMA assessment and provide relief funding to the State of Yap, although it is impossible to

estimate the extent of this funding. Given the low level of media coverage of this disaster it is unlikely that international interest will be raised above its present level. The UNDAC Team proposal has been supported by Yap State Government and will be presented to FSM National Government for endorsement. The proposal recognizes the need for the State of Yap and the National Government to review their disaster plans, to build a consistent national approach of disaster management, and to raise awareness, resilience and national capability to mitigate the consequences of disasters. The FSM Government will seek UNDP funding for implementation of this proposal.

6.10 Long term

Disasters will continue to impact the communities of FSM. Appropriate disaster warnings and an aware populace means that vulnerability of communities will be reduced. Improved community awareness and resilience should in the longer term have a significant impact in reducing the consequence of any disaster, whilst improved national disaster coordination and management arrangements should have a significant impact in supporting more efficient relief distribution and logistics.

6.11 Infrastructure

Given the severity of the typhoon the level of infrastructure damage was low. Repairs were effected quickly and those communities with significant infrastructure were only inconvenienced for a few days rather than weeks or months. Public Works was efficient in clearing roads and reinstating transport. YSPSC repaired the damage to the electricity and reticulated water supply systems (where available) within a few days, although there is a concern that the public sector corporation needs to play a greater role in relief and recovery, which is an issue for the Yap State Government.

6.12 Education and technical assistance

Yap State education department is an impressive part of the public sector. Little damage was observed to schools due, in the main, to their solid construction, and there was correspondingly little disruption to school life as a result of the typhoon. The Education Local Area Network could be put to use during the warning stages of typhoon development as the main outer island warning system. This would require greater emphasis on disaster preparedness and awareness in the school curriculum, an idea that was enthusiastically supported by the Director of Education. Schools could also be the focal point for building local capacity to recover from disasters.

6.13 Logistics and distribution systems

The logistics and distribution processes managed by Yap State were both efficient and effective. One concern was the delivery and distribution of external relief through air-drops and externally arranged delivery. This system was unmanaged and inefficient and consequently led to the damage of approximately 40% of relief supplies delivered by this means. In the future all disaster relief must be coordinated through a single point and this focal point must be the DCO.

7 FUTURE ACTION

7.1 United Nations (UN)

This mission represents an opportunity for the UN to develop closer relationships to stakeholders in FSM, building on its foundation. FSM is prone to disasters and the

Government has expressed an interest in developing capacity to reduce their consequences at national, state, and community levels. Timely disaster notifications and requests from the Government for an UNDAC team, as well as closer links between UNDP and the Government, are all important elements in developing national capability to manage the impact of future disasters.

7.2 OCHA

OCHA through UNDAC could play a critical role in supporting the disaster coordination processes now developing in FSM. Agreement to include UNDAC as an element of the national and state disaster plans, similar to the current arrangements with New Zealand, would be achievable at this time and give the FSM better access to the services offered by OCHA, including through the UNDAC System.

7.3 UNDP

It is anticipated that the FSM Government will request UNDP to support its disaster management capacity-building efforts at national, state, and community levels, as a follow-on from the UNDAC Team's work in the State of Yap. This project will be a critical element of the developmental work already underway within FSM, and it includes a review of their national disaster management arrangements, the definition and creation of national capability and resilience, and also an environmental disaster plan. These three elements are seen as critical in the most disaster-prone areas.

7.4 Other organizations

USA will continue to support FSM through the Compact and in times of disaster, through FEMA. There are strong bonds between the US Military and the FSM community based in Guam, and this group will continue to provide relief to FSM albeit in an *ad hoc* manner. Commercial and industrial enterprises, particularly the regional and local air carriers provide invaluable support to FSM in times of disaster. This arrangement is extremely effective, but is also difficult to programme.

7.5 Red Cross

Red Cross employ managers in Yap and Pohnpei and will continue to provide training and disaster relief when needed, across FSM. They maintain stores of emergency relief and first aid supplies and have a strong volunteer base throughout the islands.

7.6 South Pacific Applied Geoscience Commission (SOPAC)

SOPAC has an important future role to play in FSM. The National Government wishes to develop an integrated disaster management strategy across its four states that is consistent with the regional approach. SOPAC has developed a template centred on its Comprehensive Hazard and Risk Management (CHARM) Programme, which is tailored for the Pacific Islands and can be adapted to specific risk profiles and government policies. Their consultative approach and the CHARM methodology are congruent with the proposal under development by the FSM Government.

Georgina Bonin, Andrew Oaego & James Dance
UNDAC team

16 December 2003

ANNEXES

- A Standard UNDAC Mission Terms of Reference (TOR)**
- B UNDAC Team Schedule**
- C UNDAC Team Field Trip Notes**
- D Summary of Relief Distributed**
- E Mission Contacts List**
- F Acronyms**

Annex A – STANDARD UNDAC MISSION TOR

The United Nations Disaster Assessment and Coordination (UNDAC) system is a part of OCHA, and is deployed pursuant to a request from an affected Government, the ERC, or the Resident/Humanitarian Coordinator (RC/HC). It supports the Resident Coordinator /Humanitarian Coordinator (RC/HC) and the UNCT by providing technical services, principally in the field of on-site coordination and information dissemination. It aims to facilitate close links between country-level, regional and international response efforts. It assists in meeting international needs for early and qualified information on the situation and, when necessary, in the coordination of international relief at the site of the emergency. UNDAC teams work in close consultation and coordination with the UN Country Team (UNCT)/Disaster Management Team (DMT) and the IASC.

The following are generic terms of reference for the mission of an UNDAC Team, which establish the overall framework for UNDAC deployments. The ERC may, within this framework, modify the TOR of an UNDAC mission, consulting with the RC/HC and UNCT in the field, depending on the requirements of a given emergency situation.

When on mission, the UNDAC team:

1. Assists and works under the authority of the RC/HC, who in turn reports to the ERC when responding to disasters and emergencies.
2. Supports and facilitates the work of the affected Government and the UNCT/DMT in country, in the initial response phase of an emergency.
3. Reports to the RC/HC and informs him/her and the UNCT/DMT of developments in the emergency situation.
4. The UNDAC team may provide and disseminate initial information on the material and human dimensions of an emergency with the aim of giving host Governments and the international community a broad understanding of the nature and magnitude of an emergency. The UNDAC team will not issue appeals. Any UN appeal will be managed by the RC/HC and the UNCT.
5. While substantive multi-sectoral assessments will normally be made by the host Government, UN agencies or qualified members of the IASC, within the framework of RC-UNCT coordination, UNDAC aims to support the host Government and UNCT/DMT in facilitating the coordination of initial assessments of both the emergency situation and the international relief requirements stemming from it, with a particular view to ensuring:
 - The consistency of any preliminary information regarding the nature and scale of the emergency, the preliminary needs assessed and the relief interventions required; and,
 - The coordination of the infrastructure and logistics, including in relation to a possible deployment of UN Joint Logistic Centres;
6. During earthquakes and other emergencies involving collapsed structures where international urban search and rescue teams are deployed, UNDAC may, when requested by the affected Government, ERC, RC/HC or INSARAG, establish a specialized On-Site Operations Coordination Centre (OSOCC) with the local emergency management authorities to enable them to meet the technical needs of coordination of the international urban search and rescue teams;
7. When requested by the affected Government, ERC or RC/HC, UNDAC may establish an OSOCC for the effective integration and use of international relief assets in support of the appropriate national emergency management authority;

8. When requested by the affected Government, ERC, RC/HC and UNCT to operate in complex emergencies, UNDAC normally deploys and functions with the context of OCHA's surge capacity and operates in close consultation and coordination with the UN operational agencies;
9. The UNDAC team maintains links with and regularly reports on the progress of its mission to the ERC, UNCT/DMT and IASC partners throughout the duration of its mission.
10. As part of a joint effort to enhance system-wide coordination, OCHA will provide regular reports on UNDAC missions and field deployments to the UNDAC Advisory Board and the IASC Working Group as required.

Annex B – UNDAC TEAM SCHEDULE

Mon 01 Dec 03	1250 hrs	Mrs. Bonin (team leader) departs Apia for Nadi on FJ252.
Tue 02 Dec 03	0700 hrs	Mr. Dance departs Wellington for Auckland on NZ406.
	0800 hrs	Mr. Dance arrives in Auckland.
	0930 hrs	Mr. Dance departs for Tokyo on NZ99.
	0930 hrs	Mr. Oaego departs Port Moresby for Cairns on PX90.
	1055 hrs	Mr. Oaego arrives in Cairns.
	1205 hrs	Mr. Oaego departs for Tokyo on QF167.
	1345 hrs	Mrs. Bonin arrives in Nadi.
	1625 hrs	Mr. Dance arrives in Tokyo.
	1845 hrs	Mr. Oaego arrives in Tokyo.
	2000 hrs	Mrs. Bonin departs for Auckland on NZ67.
	2045 hrs	Messrs. Dance & Oaego depart for Guam on flight CO964, & briefly introduce themselves in the aircraft.
Wed 03 Dec 03	0005 hrs	Mrs. Bonin arrives in Auckland.
	0120 hrs	Messrs. Dance & Oaego arrive in Guam.
	0610 hrs	Mrs. Bonin departs for Sydney on QF40.
	0630 hrs	Messrs. Dance & Oaego depart for Yap on CO891.
	0800 hrs	Messrs. Dance & Oaego arrive in Yap.
	0810 hrs	Messrs. Dance & Oaego met at airport by Yap State reps.
	0815 hrs	Messrs. Dance & Oaego check in at ESA Bay View Hotel.
	0820 hrs	Mrs. Bonin arrives in Sydney.
	0845 hrs	Messrs. Dance & Oaego meet Director of OPB/DCO.
	0900 hrs	Messrs. Dance & Oaego meet Yap State Lt. Governor, Mr. Joseph Habuchmai.
	1200 hrs	Messrs. Dance & Oaego meet the FEMA assessment team.
	1400 hrs	Messrs. Dance & Oaego visit typhoon-affected area of Rumung, in the north of Yap mainland.
	2215 hrs	Mrs. Bonin departs Sydney for Tokyo on QF21.
Thu 04 Dec 03	0610 hrs	Mrs. Bonin arrives in Tokyo.
	1000 hrs	Messrs. Dance & Oaego meet with Yap State NDC.
	1030 hrs	Messrs. Dance & Oaego produce & disseminate preliminary SitRep.
	1115 hrs	Mrs. Bonin departs Tokyo for Guam on CO962.
	1400 hrs	Messrs. Dance & Oaego visit typhoon-affected areas in the southern and western parts of Yap mainland.
	1600 hrs	Mrs. Bonin arrives in Guam.
	1700 hrs	Messrs. Dance & Oaego write & disseminate SitRep No. 1.
	1940 hrs	Mrs. Bonin departs Guam for Yap on CO953.
	2110 hrs	Mrs. Bonin arrives in Yap.
	2200 hrs	Team internal briefing at ESA Bay View Hotel.
Fri 05 Dec 03	0700 hrs	Meet with Director, OPB/DCO.
	0915 hrs	Depart Yap for Ulithi Atolls (outer island).
	1005 hrs	Arrive at Ulithi Atolls.
	1020 hrs	Meet with Paramount Chief & Assistant to the Chief – tour island to assess impact of typhoon.
	1450 hrs	Depart Ulithi for Yap.
	1630 hrs	Arrive back in Yap.

	1700 hrs	Write-up SitRep No. 2/Mission Action Plan & disseminate.
Sat 06 Dec 03	0745 hrs	Depart Yap for Fais Island & Woleai Atolls (outer islands).
	0845 hrs	Arrive at Fais Island, met with village chief – tour island to assess impact of typhoon.
	1040 hrs	Depart Fais Island for Woleai Atolls.
	1225 hrs	Arrive at Woleai Atolls, met with council of chiefs – tour island to assess impact of typhoon.
	1545 hrs	Depart Woleai for Yap.
	1750 hrs	Arrive back in Yap.
	1950 hrs	Write-up SitRep No. 3 & disseminate.
Sun 07 Dec 03	0930 hrs	Briefing with Director, OPB/DCO.
	1000 hrs	Write-up rapid assessment reports.
	2030 hrs	Write-up SitRep No. 4 & disseminate.
Mon 08 Dec 03	0830 hrs	Report-writing.
	1300 hrs	Meet with Chief of Public Health, Yap State.
	1330 hrs	Team banking – collect DSA & team logistics advance.
	1600 hrs	Meet with Director, OPB/DCO, to discuss distribution plan for aid proposed for purchase using OCHA Grant.
	1800 hrs	Write-up SitRep No. 5 & disseminate.
Tue 09 Dec 03	0900 hrs	Briefing with Director, OPB/DCO.
	0930 hrs	Team internal debriefing.
	0945 hrs	Meet with Director, Yap Chapter, MRCS.
	1030 hrs	Meet with Director, Yap State Legislature.
	1100 hrs	Meet with Acting Director, Yap State Office of Education.
	1300 hrs	Meet with General Manager/Management Team, YSPSC.
	1515 hrs	Meet with Chief of Contracts & Engineering Management, Yap State Public Works Department.
	1700 hrs	Write-up SitRep No. 6 & disseminate.
Wed 10 Dec 03	0900 hrs	Briefing with Director, OPB/DCO.
	1000 hrs	Report-writing & preparation of cabinet briefing.
	1700 hrs	Write-up SitRep No. 7 & disseminate.
Thu 11 Dec 03	0900 hrs	Briefing with Director, OPB/DCO.
	1000 hrs	Brief Yap State Cabinet (PowerPoint presentation).
	1100 hrs	Report-writing – Mission Report.
	1700 hrs	Write-up SitRep No. 8 & disseminate.
	1900 hrs	Formal Dinner with Director, OPB/DCO.
Fri 12 Dec 03	0900 hrs	Report-writing – Mission Report.
	1015 hrs	Briefing with Director, OPB/DCO.
	1100 hrs	Report-writing – Mission Report.
	1200 hrs	Formal lunch hosted by DCO.
	1100 hrs	Report-writing – Mission Report.
	1700 hrs	Write-up SitRep No. 9 & disseminate.
	1900 hrs	Farewell Reception hosted by the Governor of Yap State.
Sat 13 Dec 03	0900 hrs	Report-writing – Mission Report.
	1200 hrs	Finalize Mission Report.
	1600 hrs	Present Mission Report to Director, OPB/DCO.

Sun 14 Dec 03	0400 hrs	Team departs Yap for Guam on CO954.
	0530 hrs	Team arrives in Guam.
	1230 hrs	Mrs. Bonin continues on CO954 & arrives in Pohnpei.
	1300 hrs	Mr. Dance departs Guam for Tokyo on CO6.
	1545 hrs	Mr. Dance arrives in Tokyo.
	1630 hrs	Mr. Dance departs Tokyo for Auckland on NZ90.
	1940 hrs	Mrs. Bonin departs Guam for Pohnpei on CO958.
	1955 hrs	Mr. Oaego departs Guam for Cairns on flight CO902.
Mon 15 Dec 03	0024 hrs	Mr. Oaego arrives in Cairns.
	0030 hrs	Mrs. Bonin arrives in Pohnpei.
	0700 hrs	Mr. Oaego departs Cairns for Port Moresby on QF379.
	0825 hrs	Mr. Oaego arrives home in Port Moresby, PNG.
	0900 hrs	Mr. Dance arrives in Auckland.
	1030 hrs	Mr. Dance departs Auckland for Wellington on NZ421.
	1130 hrs	Mr. Dance arrives home in Wellington, New Zealand.
Tue 16 Dec 03	1445 hrs	Mrs. Bonin departs Pohnpei for Guam on CO957
	1715hrs	Mrs. Bonin arrives in Guam.
Wed 17 Dec 03	1300 hrs	Mrs. Bonin departs Guam, CO6
Thu 18 Dec 03	1040 hrs	Mrs. Bonin arrives Sydney
	1800 hrs	Mrs. Bonin departs Sydney for Auckland, NZ106
	2300 hrs	Mrs. Bonin arrives Auckland
	2359 hrs	Mrs. Bonin departs Auckland, NZ60
	0350 hrs	Mrs Bonin arrives at Faleolo International Airport, Samoa

Annex D – SUMMARY OF RELIEF DISTRIBUTED

TYPHOON LUPIT EMERGENCY RELIEF DISTRIBUTION														
<i>Updated as of: 0900 - 12/12/03</i>														
State of Yap, 1- 30 December 2003														
Name of Atolls	Islands	Population	FEMA Assess Assessment 30/1-102/12/03	UNDAC Assessment 3- 14, Dec 03	DIAT	Delivery of Relief by Type/Donor								Comments
						Micro Spirit dist.		Guam Blue Sky		Pacific Mission Aviation - PMA		FSS Micronesia (02) (Patrol Boat)		
						Water	Food (Oats)	Water	Food	Water	Food	Water	Food	
Yap Proper		8,164	285,000											Micro Spirit departed for relief
Woleai	<i>Seliap</i>	94		Building & Gardening Tools		846	25							distribution in the outer islands on Tue, 09 Dec 2003, 18:00
	<i>Wottegai</i>	122				1314	25							<u>Itinerary: - Micro Spirit:</u> Yap, Ulithi, Fais , Eurapik Woleai, Ifaluk, Faraulep Elato, Lamotrek, Satawal Lamotrek, Elato, Faraulep, Ifaluk, Woleai, Eurakip,
	<i>Falalus</i>	146				4446	25							
	<i>Falalop</i>	494				1071	50							
	<i>Tagailap</i>	119				1098	25							
		975	120,000			8775	150							
Ulithi Atoll	<i>Falalop</i>	400		Building Tools & Materials		3600	50			56 cases				Fais, Ulithi, Yap.
	<i>Asor</i>	58				522	15							ETA: Tue, 23 Dec 2003 in Yap
	<i>Mogmog</i>	119				1071	45							08/12/03: -WWII unexploded

												ordinance
	<i>Fathrai</i>	147				1323	25					found in Tegailia & Woleai. FSS Micronesia
		724	177,800			6516	85					02 crew barricade the two sites.
Ifaluk Atoll	<i>Falalop</i>	192		Chainsaws & building tools		1728	60				254 cases	236/50 grams rice
	<i>Rawey</i>	369				3321						
		561				5049						FSS Micronesia 02: 12/12/03 - Location:- Fayu, Satawai.
Fais		250	76,300	Chainsaws, Bldg Materials & Tools		2250	57	20 cases		30 cases		105/50 grams rice
Ngulu		26				234						
Eaurapik		113				1017	40					
Faraulep		141	81,400			1269	40					
Piig		80				720	15					
Elato		96				864	25					
Lamotrek		339				3051	50					
Satawal		531				4779	60					
		12,000	740,500	10,000		34,524	652	20		86	254	341 Bags
2000 Population Census			Estimates of Damage costs			9 Ltrs p/p- p/d						
												Rafter Ties:- 47

Annex E – MISSION CONTACTS LIST

NAME	TITLE / ORGANISATION / ADDRESS	CONTACT DETAILS
FSM – Yap State Government & Other Agencies		
Mr. Robert A. Ruecho'	Governor State of Yap Office of the Governor, P.O. Box 39, Colonia, Yap, FSM 96943	Ph: (+691) 350 2108/2109 Fax: (+691) 350 4113 Email: govyap@mail.fm
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Hon. Tony Ganangiyon	Speaker of Parliament Yap State Government, FSM	Ph: (+691) 350 2400 Fax (+691) 350 4106 Email: legisyap@mail.fm
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Mr. James Lukan	Director Yap Red Cross Chapter, State of Yap, FSM	Ph: (+691) 350 4226 Fax: Email: yaphpofsm@mail.fm
FSM – National Government & Other Agencies		
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Excellency Honourable Joseph L. Urusemal	President of the Government of The Federated States of Micronesia Office of the President P.O. Box PS-53 Palikir, Pohnpei FSM 96941	Ph: (+691) 320-8815 Fax: (+691) 320-8936 Email: na

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Annex F – ACRONYMS

CHARM	Comprehensive Hazard and Risk Management (Programme)
DCO	Disaster Coordination Office
DMT	(UN) Disaster Management Team
EPA	(US) Environmental Protection Agency
ERC	The Emergency Relief Coordinator
FEMA	Federal Emergency Management Agency (US Government)
FSM	Federated States of Micronesia
HC	(UN) Humanitarian Coordinator
IASC	Inter Agency Standing Committee
IFRC	International Federation of Red Cross and Red Crescent Societies
TOR	Terms of Reference
TRAC	Target Resources Allocated from Core (UNDP funding)
MRCS	Micronesia Red Cross Society
NDC	National Disaster Committee
NDMO	National Disaster Management Office
NGO	Non-Governmental Organization
OCHA	(United Nations) Office for the Coordination of Humanitarian Affairs
OPB	(Yap State) Office of Planning and Budget
OSOCC	On-Site Operations Coordination Centre
PNG	Papua New Guinea
RC	(UN) Resident Coordinator
SitRep	Situation Report
SOPAC	South Pacific Applied Geoscience Commission
SPREP	South Pacific Regional Environment Programme
SS	steam ship
UN	United Nations
UNCT	United Nations Country Team
UNDAC	United Nations Disaster Assessment and Coordination
UNDP	United Nations Development Programme
US	United States
USA	United States of America
US\$	United States Dollar
WHO	World Health Organization
YSPSC	Yap State Public Services Corporation