# Protracted Relief and Recovery Operation (PRRO 200065) Response to Recurrent Natural Disasters and Seasonal Food Insecurity in Madagascar

| MADAGASCAR PRRO 200065                                   |   |  |
|--|---|--|
| Number of beneficiaries         516,000 (yearly average) |   |  |
| Duration of project                                      | 24 months (1 July 2010 – 30 June<br>2012) |  |
| Food tonnage   | 32,795 mt                                 |  |
| Cost (United States dollars)                             |   |  |
| WFP food cost US\$ 11,918,508                            |   |  |
| Total cost to WFP  | US\$ 24,936,793                           |  |

# **EXECUTIVE SUMMARY**

The protracted relief and recovery operation (PRRO) 200065 will address the continued needs of cyclone-affected populations on the east coast and drought-affected people in the south of the country. The situation of these populations has been further destabilized as a result of the recent political and social unrest.

Madagascar, with a population of roughly 19 million, is classified as a least developed, low-income, food deficit country, and is ranked 145<sup>th</sup> out of 177 countries by the 2009 United Nations Development Programme Human Development Report. About 70 percent of the population live below the poverty line and 60 percent of the population live on less than one US dollar per day.

A nation-wide Comprehensive Food Security and Vulnerability Analysis, undertaken by WFP in 2005, found that 25 percent of the rural population was food-insecure. These findings were confirmed by a secondary data analysis (SDA), commissioned by WFP in June 2009. The country is faced with frequent droughts, cyclones and floods that exacerbate an already precarious food security situation. In the last four decades, over 50 natural disasters have affected the country. Food insecurity is pervasive in the South due to prolonged drought conditions and a generally arid environment and seasonal in the east due to cyclones and subsequent flooding. Food insecurity is traditionally most pronounced from October to March, just before the main harvest.

During the lean season, the global acute malnutrition rate gets as high as 15 percent, and even higher in drought or cyclone affected areas. The prevalence of stunting and underweight among children under 5 is 53 percent and 36 percent respectively.<sup>1</sup>

An external evaluation of the current PRRO 104420 undertaken in November 2008 concluded that WFP's interventions and response mechanisms, including those adopted to address unforeseen events, were relevant and appropriate. Geographical and household targeting was found to be accurate. However, the evaluation recommended that the recovery component be strengthened. Based on the experience gained from the

<sup>&</sup>lt;sup>1</sup> UNICEF State of the World Children 2010.

present operation, it is proposed that WFP will continue to address relief and early recovery needs by pre-positioning food stocks in disaster-prone areas to ensure a timely response in the aftermath of a natural disaster and protect the most vulnerable vulnerable populations from falling into further destitution.

WFP intends to reach each year 516,000 food-insecure and vulnerable people. In the drought-prone south and cyclone-prone areas (mainly the eastern seaboard), a relief component will act to save lives and protect livelihoods. Under the early recovery component, WFP will respond to both slow and rapid onset disasters with the aim of reducing the emergence of negative coping strategies, mitigating assets' depletion and restoring key livelihood assets. Activities will include general food distributions, food for work and a nutrition rehabilitation programme for moderately malnourished children and pregnant and lactating women.

The specific objectives of the operation are to: i) reduce acute malnutrition in children under 5 in targeted populations; ii) improve food consumption for targeted emergency-affected households in line with Strategic Objective 1 of the WFP Strategic Plan ("Save lives and protect livelihoods in emergencies"), and iii) restore the livelihoods of food-insecure households in line with Strategic Objective 3 ("Restore and rebuild lives and livelihoods in post-disaster situations"). WFP will also continue its efforts to establish partnerships for community-based disaster management and mitigation. The activities will contribute to the following Millennium Development Goals: 1, "Eradicate extreme poverty and hunger"; 4, "Reduce child mortality"; and 5, "Improve maternal health".

In light of the continuing political crisis and the limited prospects for an early solution, WFP proposes a two-year PRRO expansion phase in order to allow time for elections and the formation of a democratically-elected government before engaging in extensive consultations with the government counterparts on the design of future assistance.

# SITUATION ANALYSIS AND SCENARIOS

#### The overall context

- Madagascar is classified as a least developed and low-income, food deficit country. The 2009 United Nations Development Programme (UNDP) Human Development Report ranks Madagascar 145th out of 177 countries in terms of human development. Over 60 percent of the estimated 19 million inhabitants survive on less than one US dollar per day.
- 2) Madagascar is adversely affected by recurrent droughts, floods and cyclones. In the last four decades, over 50 natural disasters have impacted on the country.<sup>2</sup> Unlike the drought conditions which are particularly localized in the South, the cyclones and subsequent floods could affect any regions of the country. The most frequently hit areas are in the eastern seaboard and, to a lesser extent, the western coastlines. The increasing fragility of entire ecosystems as a result of deforestation and poor land management practices are major causes of the increased susceptibility to shocks and related food insecurity observed in Madagascar over the past decades. Women are especially affected by natural disasters due to their vulnerability, role as water fetchers and farmers. Female heads of households also cannot migrate to look for better opportunities when harvest is destroyed after a cyclone or drought.
- 3) In early 2009, political unrest erupted in Madagascar, culminating in an overthrow of the Government in March. A transition government was established but has not been recognized by the international community. One year later, despite intensive mediation efforts by the African Union (AU) and Southern African Development Community (SADC), dialogue between the main political parties has failed to produce an agreement on the way forward for a return to a democratic rule.
- 4) Although Madagascar's economy had been improving over the last decade it has been in recession since mid-2009 and prospects remain poor for 2010.<sup>3</sup> The economic growth rate has fallen from 7 percent in 2008 to 0.6 percent in 2009.<sup>4</sup> The suspension of all non-humanitarian aid by major donors, including the International Monetary Fund (IMF), and a downturn in commercial investments are contributing to a pessimistic future for employment and economic security.

# The food security and nutrition situation

- 5) A nation-wide Comprehensive Food Security and Vulnerability Analysis (CFSVA), undertaken by WFP in 2005, found that 25 percent of the rural population was food-insecure. These findings were confirmed by a secondary data analysis (SDA), commissioned by WFP in June 2009.
- 6) Food insecurity is pervasive in the South due to prolonged drought conditions and a generally arid environment and seasonal in the east due to cyclones and subsequent flooding. Food insecurity is traditionally most pronounced from October to March, just before the main harvest. Seasonal food insecurity is mainly caused by the depletion of household food stocks prior to the next harvest which may be accompanied by an increase in the price of staple food commodities, making it more difficult for poor rural families to purchase. As the lean season overlaps with the cyclone season (December to April), seasonal food insecurity is often further aggravated by natural disasters.

<sup>&</sup>lt;sup>2</sup> EMDAT: The OFDA/CRED International Disaster Database, Université Catholique de Louvain -Brussels – Belgium

<sup>&</sup>lt;sup>3</sup> World Bank – February 1, 2010 Madagascar – Economic Update: 2009 and beyond.

<sup>&</sup>lt;sup>4</sup> Statistic of Government of Madagascar.

- 7) Underlying causes of food insecurity in Madagascar include low levels of agricultural productivity attributed to out-of-date farming techniques, insufficient and poorly maintained infrastructure and limited access to agricultural extension services. Poor physical access to many parts of Madagascar, especially in the rainy season, severely limits transport and marketing opportunities. These factors often result in lack of dietary diversity as a result of limited food access.
- 8) The efficiency of food utilisation is undermined by relatively high rates of disease and exacerbated by limited health care services as well as poor hygiene, care and sanitation practices.
- 9) Various assessments and studies conducted between 2005 and 2009<sup>5</sup> found that the drought-prone, semi-arid South and the cyclone-prone, eastern seaboard were the most vulnerable and food-insecure areas of Madagascar. These include the Regions of Androy, Anosy, Atsimo Andrefana (South), Vatovay Fitovinany, Analanjirofo, Atsimo Atsinanana (East), and Menabe (West).
- 10) A crop and food security assessment, conducted jointly by the Food and Agriculture Organization (FAO) and WFP in June-July 2009, reported a shortfall of 130,000 mt on national 2009/2010 cereal balance, mainly attributed to maize crop failure due to drought in the South and crop loss due to cyclone in the cyclone affected areas.<sup>6</sup> The assessment found that nearly all households in Atsimo Andrefana and Androy regions and half the households in the Anosy region have experienced a shock in the past 12 months that affected agricultural production and household food security. Continued exposure to repeated shocks would eventually deplete assets and result in the loss of productive livelihoods, making it much more difficult for these households to rebuild such assets.
- 11) During the lean season, the global acute malnutrition (GAM) rate gets as high as 15 percent, and even higher in drought or cyclone affected areas.<sup>7</sup> At national level, the prevalence of stunting and underweight among children under 5 is 53 percent and 36 percent respectively and is a clear outcome of long-term undernutrition. Iron deficiency (anaemia) affects more than 51 percent of children 6-59 months and almost 36 percent of child-bearing women.<sup>8</sup>

# Scenarios

12) Elections are expected to be held in 2010 but the results may not be recognized by the international community. Therefore, the resumption of international aid and the upturn of economy in the short-term are uncertain. In case of an abrupt decline in the political situation, the following consequences should be anticipated: i) disruption in the movement of goods resulting in a drastic increase in the price of basic commodities, ii) a deterioration of basic social services delivery and the living conditions of the population in urban areas; and iii) further deterioration of security conditions. Should such scenario take place, a budget revision to the PRRO would be prepared to assist the most vulnerable groups, especially those living in urban slums.

<sup>&</sup>lt;sup>5</sup> Assessments include i) the 2005 CFSVA; ii) a food security study funded by the United States Agency for International Development (USAID) undertaken under the Food and Nutrition Technical Assistance Project (FANTA) in 2008; iii) the June 2009 SDA; and iv) the FAO/WFP crop and food security assessment conducted in June-July 2009.

<sup>&</sup>lt;sup>6</sup> FAO/WFP Crop and Food Security Assessment Mission to Madagascar, July 2009.

<sup>&</sup>lt;sup>7</sup> UNICEF, State of the World's Children, 2008.

<sup>&</sup>lt;sup>8</sup> Government of Madagascar, Demographic and Health Survey (DHS) 2008-2009.

13) Should a more positive scenario develop throughout 2010, such as the organisation of inclusive elections and the formation of a consensual government, the implementation of programmes for responding to and mitigating the effects of natural disasters would resume under the leadership of the Government and other relevant stakeholders. These programmes would help the country in establishing sustainable mechanisms for responding to the natural calamities that the island is confronted with on a yearly basis.

# POLICIES, CAPACITIES AND ACTIONS OF THE GOVERNMENT AND **OTHERS**

#### Policies, capacities and actions of the Government

- 14) The Government is aware of the current food security situation and the impact of recurring natural disasters, particularly for the population of the south and east. Consequently, various measures of a policy and institutional nature were implemented.
- 15) The Madagascar Action Plan (MAP 2007 2012)<sup>9</sup> is a key national development plan that aims to achieve the Millennium Development Goals (MDGs) and proclaims strong political will to shift from a policy of disaster response to one of disaster prevention and mitigation. It also intends to reduce the United Nations vulnerability index (deaths per million inhabitants) for Madagascar from 4.2 in 2005 to 2.1 in 2012.
- 16) The National Policy for Disaster and Risk Management (DRM)<sup>10</sup> defines the strategies and institutions to implement this framework. The strategy covers six main components:
  - a) creation of the institutional mechanisms for DRM;
  - b) strengthening institutional capacity at all levels for DRM;
  - c) development of a global information system;
  - d) development of financing mechanisms;
  - e) measures to reduce national vulnerability and disaster risk exposure; and
  - f) measures to enhance regional and international cooperation.
- 17) As per the DRM policy, a National Disaster and Risk Management System was created and an institutional framework was established at national and local levels charged with the coordination and implementation of activities.
- 18) To address the high levels of malnutrition, the Government developed a National Nutrition Policy (NNP)<sup>11</sup> and a National Plan of Action for Nutrition (NPAN) in 2007. As a result, a National Nutrition Office (NNO) and a National Nutrition Council (NNC) were created to oversee the implementation of the NNP. On the prevention side, the National Programme for Community Nutrition is responsible for growth monitoring and nutrition education covering only 30 percent of children, but faces funding difficulties. On the emergency response side, the Government carries out Standardized Monitoring and Assessment of Relief and Transition (SMART) surveys when required, supported by the United Nations Children's Fund (UNICEF). Treatment of severe acute malnutrition (SAM) is in place in some of the most vulnerable parts of the country with UNICEF support.

<sup>&</sup>lt;sup>9</sup> Madagascar Action Plan 2007 -2012, the Country's 5-year Poverty Reduction Strategy document, 2006. <sup>10</sup> National Policy for Disaster and Risk Management, adopted by the 2003-10 Law, 2003.

<sup>&</sup>lt;sup>11</sup> National Nutrition Policy, 2007.

- 19) Some of the existing food insecurity and early warning systems have not been functional and are being phased out. New systems are being considered, the most pertinent to WFP's activities is the *Système d'Alerte Précoce* (SAP Early Warning System), which was originally set up in 1993 with the support of the European Union (EU). The SAP provides regular reporting and analysis on the food security situation in 104 municipalities in the drought-prone south. In January 2009, WFP took over the management of the SAP with funding from the EU for a two-year period.
- 20) Since the start of the political stalemate in early 2009, the United Nations and international community has limited contact with the Government. Contacts at a technical level are maintained to implement the ongoing humanitarian activities. After democratic elections take place, relationships with the new government are expected to normalize.

#### Policies, capacities and actions of other major actors

- 21) The World Bank has developed a three-pronged approach to the cumulative impact of recurrent natural disasters in Madagascar. In August 2008, a budget support operation valued at US\$10 million was launched to alleviate the immediate macroeconomic impact of cyclones but was then overshadowed by the food and fuel price crises. The World Bank provided an additional US\$30 million to the existing International Development Association (IDA) rural project for activities that would enhance agricultural production and productivity in the medium term. In December 2008, the World Bank approved an additional US\$40 million cash-for-work project to be implemented by the *Fonds d'Intervention pour le Développement* (FID-Investment Fund for Development) which aimed to increase access to short-term employment in targeted food-insecure areas and restore access to social and economic services following natural disasters. To date, only US\$12 million have been made available for food security interventions - all remaining funds are blocked due to the political stalemate.
- 22) USAID launched a new programme entitled 'Strengthening and Accessing Livelihoods Opportunities for Household Impact' (SALOHI). The SALOHI program targets 591,000 vulnerable people in rural communities in the eastern and southern parts of the country. The programme is implemented by a consortium of international non-governmental organizations (NGOs) lead by Catholic Relief Services (CRS) and including the Adventist Development and Relief Agency (ADRA), Cooperative for Assistance and Relief Everywhere (CARE) and the Land O'Lakes International Development Division. WFP will provide technical expertise to design community-based early warning system.
- 23) The strategy for 2007-2012 of the International Fund for Agricultural Development (IFAD) includes activities to i) improve access by the poor to resources and services, ii) increase farm incomes through diversification and development of rural micro-enterprises, and iii) include poor producers in the economic policy dialogue. ADRA, CARE, CRS and several national NGOs are actively involved in disaster response activities in Madagascar.

# Coordination

- 24) Following the 2007-2008 cyclone season, under the leadership of the respective line ministries, United Nations agencies and NGOs started coordinating the disaster preparedness and response interventions for each sector. A *Comité de Réflexion des Intervenants en Catastrophe* (CRIC Reflexion Stakeholders Comity for disasters) lead by the Government, was responsible for the overall inter-sectoral coordination.
- 25) Since the coup d'etat in early 2009, United Nations agencies have established the cluster system, with a United nations agency acting as cluster-lead for each cluster. At present, there are eight clusters attended by United Nations agencies, NGOs and donors, and a coordinating Inter-Agency Standing Committee (IASC) Humanitarian Group (comprised of Heads of Agencies). WFP chairs the logistics cluster, co-chairs with FAO the food security and livelihoods cluster and actively participates in the UNICEF-chaired nutrition cluster while also maintaining linkages with the other clusters.

# **OBJECTIVES OF WFP ASSISTANCE**

- 26) Building on past experience, the main focus of the PRRO will be to prepare for and respond to recurring disasters and nutritional crisis in a more efficient and effective manner. WFP will also continue to invest in practical measures aimed at establishing partnerships for community-based disaster management and mitigation.
- 27) The specific objectives of the operation are to: i) reduce acute malnutrition in children under 5 in targeted populations; ii) improve food consumption for targeted emergency-affected households in line with Strategic Objective 1 of the WFP Strategic Plan ("Save lives and protect livelihoods in emergencies"), and iii) restore the livelihoods of food-insecure households in line with Strategic Objective 3 ("Restore and rebuild lives and livelihoods in post-disaster situations"). Activities will include general food distributions (GFD), food for work (FFW) and supplementary feeding for moderately malnourished children aged 6-59 months and pregnant and lactating women.

# WFP RESPONSE STRATEGY

# Nature and effectiveness of food security related assistance to date

- 28) Since 1991, WFP has responded to cyclones, flooding and droughts in Madagascar through various emergency operations (EMOPs). Following a series of consultations with United Nations agencies, Government and NGOs in late 2005, it was concluded that a PRRO would be a more effective mechanism for WFP to respond to seasonal shocks, mitigate their impact and build community resilience. As a result, WFP launched PRRO 104420 in July 2006, providing relief and recovery assistance to affected populations. The PRRO was originally scheduled to end in July 2008, but was extended in time until June 2010 through several budget revisions.
- 29) The PRRO evaluation, undertaken in November 2008, revealed that the geographical and beneficiary targeting was appropriate and that food rations were adequate and corresponded to the dietary and cultural habits of the beneficiaries. It also welcomed the country office's ability to adapt interventions to unanticipated factors such as the inclusion of nutritional projects following a cyclone. The

evaluation suggested that the recovery component of the PRRO be strengthened in order to facilitate the transition from recovery to medium-term development. This implies ensuring continuity with cooperating partners' own activities, or using a set of low tech/low risk activities which can be handled by the communities themselves with no or limited technical support. WFP and CARE are currently identifying a set of activities and preparing work norms for use by local partners and community level decision-makers. These recommendations and the lessons learned were incorporated into the proposed PRRO expansion.<sup>12</sup>

- 30) Under its country programme, WFP has been addressing hunger and food security challenges in Madagascar, mainly concentrated in the arid southern regions, the south east and urban areas. The country programme is composed of three components, namely:
  - a) Support to basic education;
  - b) Reduction of food insecurity through mitigation of natural disaster and environmental protection; and
  - c) Prevention of malnutrition through seasonal blanket feeding for children 6-23 months and pregnant and lactating women in most food-insecure municipalities of the South; support to tuberculosis (TB) patients and people living with HIV (PLHIV).

#### **Strategy outline**

31) Given the political impasse, the United Nations Country Team is not able to engage in extensive consultation with the Government. Therefore, the proposed PRRO involves limited changes in the response strategy.

An expansion will allow WFP to respond comprehensively to recurring natural disasters and to address the needs arising from seasonal food insecurity in the most vulnerable regions of Madagascar. The PRRO will address relief and early recovery needs in the immediate and medium aftermath of a natural disaster. By prepositioning contingency food stocks in disaster-prone areas, WFP will be able to respond in a timely manner and protect the most vulnerable segments of the population from falling into further destitution. WFP's response aims to ensure that assets are not depleted and that traditional coping mechanisms are not over-used.

#### Relief

32) *Response to drought:* In the event of slow onset disasters (drought) and seasonal food insecurity, relief assistance will be provided to the most vulnerable households during three months to protect households' livelihoods and assets. Where NGOs have sufficient technical capacity and adequate planning, assistance will be mainly channelled through low technology/low risk FFW activities. Examples of FFW activities include collection and shaping of stones for road repair and maintenance, cow dung collection and heap formation at homestead level, and construction of temporary shelters. However, where NGO partners do not have sufficient technical

<sup>&</sup>lt;sup>12</sup> The following actions were taken to address the evaluation recommendations:

i) The CP has been re-designed through its two-year extension (approved in 2009) to ensure synergy and continuity with the PRRO. While CP addresses SO 2 and 4, the PRRO addresses SO 1 and 3.

ii) VAM/M&E capacity has been strengthened

iii) WFP took over the SAP in the South and launched a new partnership with a consortium of international NGOs for the set up of an early warning system in the South East.

capacity and adequate planning, or when households do not have able-bodied workers, relief assistance will be provided through GFD.<sup>13</sup>

- 33) *Response to cyclones/floods:* In the event of rapid onset disasters (cyclones and floods), a general food ration will be provided for a maximum of one month to the affected communities. In some isolated and hard to reach areas, WFP will provide high-energy biscuits (HEB) for the first five days, followed by a general food ration. Food stocks will be prepositioned ahead of the cyclone season in locations that are at high risks of cyclones and flood damage.
- 34) *Nutrition rehabilitation:* In line with the Nutrition cluster's recommendations, a 3month nutritional rehabilitation programme targeting moderately malnourished children 6-59 months will be carried out where GAM rates exceeds 10 percent,<sup>14</sup>. The nutrition rehabilitation programme will be implemented by WFP in coordination with UNICEF, the National Office of Nutrition (NON) and the Ministry of Health (MoH). Blanket feeding for pregnant and lactating women will also be carried out in the affected areas, prioritising districts with the highest acute malnutrition rates, as recommended by the Cluster.

#### Early recovery

- 35) Under the early recovery component, WFP will respond to both slow and rapid onset disasters with the aim of reducing the emergence of negative coping strategies, mitigating assets depletion and restoring key livelihood assets.
- 36) Response to drought: Vulnerable communities affected by drought and seasonal food insecurity in the South will be assisted over 3 months to avoid asset depletion and mitigate the effects of drought. Early recovery activities in the drought-prone south will be based on the capacity of local partners and communities as experience demonstrates that capacity for FFW is limited in the South. In areas where local capacity of partners and/or communities is reasonably good, weather resistant low technology/low risk food assistance modalities will be employed. FFW activities will aim at reconstituting community and households' assets through investments in sustainable land management initiatives, improved environmental conditions and increased access to infrastructure. Examples of FFW activities include the restoration or rebuilding of key community and household assets, such as the deepening of water ponds for livestock, collection and planting of vegetative cuttings as wind barriers, establishment of small nurseries for vegetative cuttings and growth of indigenous species based on local knowledge. Vulnerable households that are unable to participate in FFW (i.e. female-headed households, disabled, etc.) will receive GFD for three months.
- 37) *Response to cyclones/floods:* Following one-month relief distributions, vulnerable households affected by cyclones will be supported through FFW during 3 months. A low technology/low risk approach will be followed to design and plan the FFW activities, which will include repair of roads, light bridges and social infrastructure (schools, health posts, etc).

<sup>&</sup>lt;sup>13</sup> Based on CFSVA results, 25 percent of the relief caseload is expected to be households without working capacities.

<sup>&</sup>lt;sup>14</sup> As per the SMART survey.

#### Handover strategy

- 38) Experience with the current PRRO indicates the need for a two-pronged approach to a handover strategy. First, the capacity of local partners needs to be further developed. WFP also needs to work with United Nations and NGO partners to help the Government further develop strategic policies aimed at safeguarding and improving national food security, particularly in drought and cyclone affected areas. However, because of the current ongoing political crisis, all donors and humanitarian agencies have suspended formal activities with the Government until the political stalemate is resolved. Therefore, this approach cannot be undertaken at present.
- 39) The following measures are required to develop the capacity of partners and local government (some of which are already underway):
  - a) Moving from pre-positioning stocks to the establishment of community level food security strategic reserves and strategic hubs for eventual handover to local government;
  - b) Continued support to capacity development of local NGOs and communities in planning and implementing increasingly sophisticated FFW activities and advocating for support to NGOs by donors;
  - c) Local procurement of surplus production, where feasible;
  - d) Support to the creation of a single food security early warning information system.

# **BENEFICIARIES AND TARGETING**

- 40) In order to cover the gaps resulting from a reduced national capacity, WFP will be targeting a larger number of beneficiaries in comparison with the previous PRRO. WFP plans to reach each year 413,000 vulnerable people under the relief component and 223,000 people under the early recovery component. The PRRO will focus on the most vulnerable regions as identified by the SDA conducted in June 2009: Androy, Atsimo Andrefana (South), Vatovay Fitovinany, Atsimo Atsinanana (Eastern seaboard) and Menabe (West coast).
- 41) Wherever disaster strikes, WFP, together with United Nations agencies, NGOs and government counterparts will conduct rapid assessments to evaluate the impact on the food security situation, identify beneficiary needs and propose response options.

# Relief

42) *Response to drought*: In the drought-prone South, relief assistance will be targeted towards households living on marginal agricultural land who are among the poorest. Those households face the most acute impact of shocks and are at greatest risk of employing unsustainable and negative coping strategies. Based on historical trend analysis, an estimated 266,000 people are expected to be drought-affected in the South.<sup>15</sup> Taking into consideration the response capacity of other partners, WFP plans to assist 200,000 people among this group. Since part of the drought-affected households will be already receiving WFP assistance under the early recovery component, WFP intends to reach 97,000 drought-affected people under the relief component.

<sup>&</sup>lt;sup>15</sup> This number is a peak average over a 4-year period.

- 43) *Response to cyclones/floods:* On seaboard regions, although cyclones tend to impact entire communities, often the poorest households (female-headed households, disabled-headed households, households with no able bodied workers, households with limited or no access to productive land, and households who that have lost all crops) incur the greatest structural damage and asset loss as they live in the most environmentally degraded areas. These targeting criteria will be refined through consultation with the inter-agency clusters and the targeted communities. WFP will facilitate the creation of women's support groups to enable women to be part of the decision-making process. Based on historical trend analysis, an estimated 480,000 people are expected to be affected by cyclones/flooding each year in the eastern coastal region.<sup>16</sup> Of this figure, WFP plans to assist 289,000 people among the most vulnerable. The remaining affected populations will be targeted by the World Bank and the SALOHI programme.
- 44) *Nutrition rehabilitation:* In areas with a GAM rate above 10 percent, WFP expects to reach an estimated 27,000 acutely malnourished children under 5 and pregnant women and lactating women under the nutritional rehabilitation intervention. Beneficiaries will be identified via out-reach community activities coordinated by MoH, NON and UNICEF. Targeting of children will be performed using mid-upper arm circumference (MUAC) screening<sup>17</sup> and weight for height (W/H) measures<sup>18</sup> as per the World Health Organisation (WHO) 2005 standards.

#### Early recovery

- 45) *Response to drought*: In the drought-affected southern regions, interventions will be targeted to the most vulnerable households in the priority municipalities identified by SAP monitoring. These households are chronically food-insecure, possess negligible livelihood assets and are particularly vulnerable to shocks. They are living in impoverished environments aggravated by frequent drought conditions. These factors place additional severe pressure on land use resulting in accelerated environmental degradation, unsustainable deforestation, and subsequent loss of natural resources. Of the minimum of 142,000 people who are affected by drought in the south every year,<sup>19</sup> the CFSVA suggests that 103,000 people (73 percent) are food-insecure and require food assistance.
- 46) Among this target group, the CFSVA recommended that 26,000 people receive food assistance through GFD as they may not be able to engage in labour-based activities. Female-headed households, households with disabled family members and households with limited or no access to productive land will be among this group.
- 47) The remaining 77,000 people will be assisted through FFW, depending on the availability of adequate planning and technical capacity. They will include households with able-bodied workers and access to some productive land, who are expected to have greater opportunities to engage in seasonal labour and agricultural activities. In both groups, women will be the food entitlement holders to the extent possible.

<sup>&</sup>lt;sup>16</sup> Year 2009 was not taking into account since it was not representative of a normal cyclone season.

<sup>&</sup>lt;sup>17</sup> 125mm<MUAC<110mm.

<sup>&</sup>lt;sup>18</sup> W/H: -2 Z-score< W/H<-3 Z-score.

<sup>&</sup>lt;sup>19</sup> This estimate is based on the average number of people invariably affected by drought over the period 2001–2008. Programme Review and Formulation Support Mission – Madagascar PRRO and Country Programme - Volli Carucci and Scott Ronchini (OMXD), January 2009.

48) *Response to cyclones/floods:* In the cyclone-affected regions, assistance will shift from immediate response through GFD to early recovery activities such as FFW, as communities gradually recover from the shock. Early recovery support will focus on households who have lost all their crops and means of livelihood. Approximately 120,000 people are expected to require FFW assistance, beyond the initial month.

| TABLE 1. BENEFICIARIES BY ACTIVITY TYPE |                    |              |                              |         |         |
|---|--------------------|--------------|------------------------------|---------|---------|
| Component                               | Type of            | Activity     | Annual average Beneficiaries |         |         |
| Component                               | disaster           |              | Male                         | Female  | Total   |
|   | Drought            | GFD          | 12,000                       | 12,000  | 24,000  |
| RELIEF                                  | Drought            | FFW          | 36,000                       | 37,000  | 73,000  |
|   | Cyclone            | GFD          | 142,000                      | 147,000 | 289,000 |
|   | Nutrition re       | habilitation | 11,000                       | 16,000  | 27,000  |
| SUB-TOTAL RE                            | SUB-TOTAL RELIEF   |              | 201,000                      | 212,000 | 413,000 |
| RECOVERY Drought<br>Cyclone             | Drought            | GFD          | 13,000                       | 13,000  | 26,000  |
|   |                    | FFW          | 38,000                       | 39,000  | 77,000  |
|   | Cyclone            | FFW          | 59,000                       | 61,000  | 120,000 |
| SUB-TOTAL RE                            | SUB-TOTAL RECOVERY |              | 110,000                      | 113,000 | 223,000 |
| TOTAL <sup>20</sup>                     |                    | 252,000      | 264,000                      | 516,000 |         |

# NUTRITIONAL CONSIDERATIONS AND RATIONS

- 49) In very remote areas where food cannot be delivered promptly, a 5-day ration of HEB will be distributed to the affected population, followed by the provision of a general food ration. Based on the last three years' experience, it is estimated that about 44,000 people will require HEB.
- 50) The general food ration composed of rice (or maize), pulses, and vegetable oil meets the nutritional requirements and local eating habits of the targeted population. Rice is the staple cereal for most of the country, except in the South, where the population consumes maize. WFP plans to undertake a feasibility study to explore the possibility of using fortified rice under the CP and PRRO.
- 51) The size and composition of FFW rations is based on the transfer value and local wage rate.
- 52) As the nutrition rehabilitation programme focuses on the treatment of acute malnutrition, commodities rich in micronutrients will be provided, including corn-

<sup>&</sup>lt;sup>20</sup> In cyclone affected region, 120,000 beneficiaries will receive recovery assistance following the relief phase. Total caseload is adjusted in order to avoid double counting.

soya blend plus (CSB+) and fortified vegetable oil. This ration is in line with the national protocol on the treatment of moderate acute malnutrition (MAM).

|                        |                         | TABLE 2:                      | DAILY FO                      | OD RATIO                           | N BY ACTIV                                     | /ITY                               |                               |                                    |
|------------------------|-------------------------|-------------------------------|-------------------------------|------------------------------------|--|------------------------------------|-------------------------------|------------------------------------|
| Component              |                         |                               | Relief                        |                                    |  |                                    | Recovery                      |                                    |
| Commodity Type         | GFD HEB<br>(g/pers/day) | GFD<br>Cyclone<br>(g/pers/day | GFD<br>Drought<br>(g/pers/day | FFW<br>Drought<br>Family<br>ration | Nutrition<br>rehabilitati<br>on<br>(g/pers/day | FFW<br>Cyclone<br>Family<br>ration | GFD<br>Drought<br>(g/pers/day | FFW<br>Drought<br>Family<br>ration |
| Rice                   |                         | 450                           |                               |                                    |  | 2 000                              |                               |                                    |
| Maize                  |                         |                               | 450                           | 2400                               |  |                                    | 450                           | 2400                               |
| Pulses                 |                         | 100                           | 100                           | 300                                |  | 300                                | 100                           | 300                                |
| Oil                    |                         | 35                            | 35                            |                                    | 25   |                                    | 35                            |                                    |
| CSB+                   |                         |                               |                               |                                    | 200  |                                    |                               |                                    |
| HEB                    | 450                     |                               |                               |                                    |  |                                    |                               |                                    |
| Total                  | 450                     | 585                           | 585                           | 2 700                              | 225  | 2 300                              | 585                           | 2 700                              |
| Total kcal/day         | 2 025                   | 2 265                         | 2 220                         |                                    | 1 021  |                                    | 2 220                         |                                    |
| % Kcal from<br>protein | 10.7                    | 9.1                           | 11.7                          |                                    | 14.1   |                                    | 11.7                          |                                    |
| % Kcal from fat        | 30                      | 15.3                          | 22                            |                                    | 32.6   |                                    | 22                            |                                    |
| Number of feeding days | 5                       | 30                            | 90                            | 60                                 | 90   | 60                                 | 90                            | 60                                 |

|                |                |                |                |                             |                | •              | ·              |                |
|----------------|----------------|----------------|----------------|-----------------------------|----------------|----------------|----------------|----------------|
| Component      |                | Re             | lief           |                             |                | Recovery       |                |                |
| Commodity Type | GFD<br>Cyclone | GFD<br>Drought | FFW<br>Drought | Nutrition<br>rehabilitation | FFW<br>Cyclone | GFD<br>Drought | FFW<br>Drought | Total<br>(mt ) |
| Rice           | 7,606          |                |                |                             | 5,760          |                |                | 13,366         |
| Maize          |                | 1,960          | 4,164          |                             |                | 2,106          | 4,464          | 12,694         |
| Pulses         | 1,689          | 436            | 521            |                             | 864            | 468            | 558            | 4,536          |
| Oil            | 591            | 152            |                | 122                         |                | 164            |                | 1,029          |
| CSB+           |                |                |                | 972                         |                |                |                | 972            |
| HEB            | 198            |                |                |                             |                |                |                | 198            |
| Total          | 10,084         | 2,548          | 4,685          | 1,094                       | 6,624          | 2,738          | 5,022          | 32,795         |

#### **IMPLEMENTATION ARRANGEMENTS**

- 53) *Preparedness arrangements:* Two months prior to the start of the cyclone season, WFP, in collaboration with the Office for the Coordination of Humanitarian Affairs (OCHA) and cooperating partners, will identify sites along the coast for prepositioning contingency stocks. The sites will be selected based on i) the level of exposure of the area, ii) the population's vulnerability to cyclones and floods; and iii) risk of non-access during the rainy season.
- 54) Field level agreements (FLAs) will be signed with CPs for the storage of prepositioning stocks. In the event of a natural disaster, WFP will authorize its partners to distribute the food stocks on the basis of the recommendations from joint WFP/ partners' assessments. Contingency stocks will also be pre-positioned at WFP's three port warehouses to enable WFP to respond to emergency situations. WFP will identify potential cooperating partners among NGOs operating in the geographical areas of concern and assess their capacity in advance.
- 55) Should the need for air transport arise, the Logistics cluster will agree on a common framework for mobilizing the necessary resources.
- 56) *Partnerships:* As specific areas in the east appear more prone to cyclones and floods, local authorities and NGOs are better organized to respond to shocks and implement early recovery and mitigation activities. WFP will continue its efforts to establish partnerships for community-based disaster management and mitigation. WFP and NGO partners such as CARE will work on strengthening capacities of local disaster management committees and institutions responsible for coordination and logistic support. Training and simulation exercises will be undertaken.
- 57) *Procurement:* When cost effective, WFP will continue to procure food locally (maize, pulses and CSB+). WFP will also monitor the rice market to assess future possibilities of local purchase.
- 58) *Logistics:* WFP has contracted various freight forwarders to handle the receipt, transit and delivery of commodities to the main warehouses. Commodities are delivered by commercial transporters to the extended delivery points (EDPs) through three main logistics corridors: 1) the northeast, through the port of Toamasina, 2) the southwest, through the port of Toliara and 3) the south, through the port of Taolagnaro. WFP's Commodity Movement Processing and Analysis System (COMPAS) is in place in all EDPs to monitor and report on the food chain.WFP will apply a revised landside transport, storage and handling (LTSH) rate of US\$155 per mt.

# **PERFORMANCE MONITORING**

- 59) WFP uses a results-oriented Monitoring and Evaluation (M&E) system consisting of consolidated monthly output monitoring of corporate indicators on beneficiaries. Data collection is undertaken by cooperating partners, before being compiled and analyzed by WFP. For nutrition interventions, post-intervention SMART surveys will monitor GAM levels and recommend any further activities. Whenever available, baseline studies will be used as a reference for the PRRO outcomes. When applicable, data from recent WFP post-distribution monitoring (PDM), impact monitoring and emergency food security assessment (EFSA) will also be used to monitor progress against key outcome indicators.
- 60) As the southern regions are the most exposed to food insecurity, WFP will maintain its sub-offices in Tulear and Ambovombe (with satellite offices in Amboasary,

Ampanihy, Tsihombe, Beloha and Bekily). WFP provides extensive M&E training to cooperating partners and WFP field staff. A WFP M&E and vulnerability analysis and mapping (VAM) officer will coordinate all M&E related capacity-building efforts.

- 61) Through PDM exercises, WFP will collect information from beneficiaries on the quantities of food aid received, the use of food aid and their degree of satisfaction. To the extent possible, outcome results will be measured through ad-hoc surveys and the review of secondary data. Mid-term and final evaluations will be undertaken by the country office with the support of the regional bureau and headquarters.
- 62) Through a system of identification and short listing of local private transporters, WFP has established a tracking system with cooperating partners and the Government to ensure that WFP food deliveries reach the expected destinations in an efficient and timely manner. Monthly coordination meetings with cooperating partners and government counterparts facilitate a progress review of distributions as well as the streamlining of delivery plans.

#### **RISK ASSESSMENT AND CONTINGENCY PLANNING**

- 63) As part of the inter-agency contingency planning process, agencies have established procedures for joint needs assessments, information management and situation monitoring. Under normal conditions, poor infrastructure (especially access roads) is the most serious constraint to WFP responding rapidly to a sudden emergency in Madagascar. However, the political crisis looms over all activities of United Nations and humanitarian partners' activities and a swift turn of events could have a serious impact on operations.
- 64) In the eventuality of an abrupt decline in the political situation leading to food insecurity and/or malnutrition, a budget revision to the PRRO will be undertaken in order to scale up the operation and respond to the needs of the urban populations.
- 65) In case of serious pipeline constraints or unexpected increases in relief requirements, WFP will explore the possibility of borrowing food stocks from the CP 103400. Where increased food needs can be foreseen, early call-forwards and related budget revisions will be initiated.

#### SECURITY CONSIDERATIONS

66) The east coast and the south of the country are classified as United Nations' security phase I. Petty crime is the greatest threat to WFP staff members and operations in the country. Manifestations that might develop from the political crisis will be closely monitored. WFP monitoring will ensure that food assistance is not used for a political purpose. All WFP staff members are trained in security awareness. Compliance with minimum operational security standards (MOSS) is maintained.

APPROVAL

# **APPROVED:**

DATE:

Josette Sheeran Executive Director

# ANNEX I-A: WFP PROJECT COST BREAKDOWN

| WFP PROJECT COST BREAKDOWN                   |                        |                                 |                 |
|--|------------------------|---------------------------------|-----------------|
| Food <sup>21</sup>                           | Tonnage<br><i>(mt)</i> | Value<br><i>(US\$)</i>          | Value<br>(US\$) |
| Cereals                                      | 26,060                 | 8,087,598                       |                 |
| Pulses                                       | 4,536                  | 1,978,890                       |                 |
| Oil and fats                                 | 1,029                  | 1,034,125                       |                 |
| Mixed and blended food                       | 972                    | 563,070                         |                 |
| Others (HEB)                                 | 198                    | 254,826                         |                 |
| Total food                                   | 32,795                 | 11,918,508                      |                 |
| Cash transfers 00 000                        |                        |                                 |                 |
| Voucher transfers 00 000                     |                        | 00 000                          |                 |
| Subtotal food and transfers                  |                        |                                 | 11,918,508      |
| External transport                           |                        |                                 | 2,458,754       |
| Landside transport, storage and handling     |                        |                                 | 5,219,013       |
| Other direct operational costs               |                        |                                 | 1,047,308       |
| Direct support costs (see Annex I-B details) |                        |                                 | 2,661,831       |
|  | Total                  | direct project costs            | 23,305,414      |
|  | Indirect su            | upport costs (7%) <sup>22</sup> | 1,631,379       |
|  | тс                     | OTAL WFP COSTS                  | 24,936,793      |

<sup>&</sup>lt;sup>21</sup> This is a notional food basket for budgeting and approval. The contents may vary.

<sup>&</sup>lt;sup>22</sup> The indirect support cost rate may be amended by the Board during the project.

# **DIRECT SUPPORT REQUIREMENTS (US\$)**

| Staff and Staff Related Costs         |           |
|---------------------------------------|-----------|
| International Professional Staff      | 966,192   |
| International GS Staff                | 0         |
| Local Staff - National Officers       | 113,516   |
| Local Staff - General Service         | 381,167   |
| Local Staff - Temporary assistance    | 0         |
| Local Staff - Overtime                | 4,000     |
| Hazard Pay & Hardship Allowance       | 0         |
| International Consultants             | 63,570    |
| Local Consultants                     | 4917      |
| Non Staff HR: UNV                     | 98,993    |
| Commercial Consultancy Services       | 12,000    |
| Staff duty travel                     | 281,499   |
| Subtotal                              | 1,925,854 |
| Recurring Expenses                    |           |
| Rental of Facility                    | 30,711    |
| Utilities General                     | 30,143    |
| Office Supplies and Other Consumables | 21,328    |
| Communications and IT Services        | 118,860   |
| Equipment Repair and Maintenance      | 34,124    |
| Vehicle Running Cost and Maintenance  | 112,607   |
| Office Set-up and Repairs             | 27,516    |
| UN Organization Services              | 17,479    |
| Subtotal                              | 392,768   |
| Equipment and Capital Costs           |           |
| Vehicle leasing                       | 132,600   |
| TC/IT Equipment                       | 49,018    |
| Local Security Costs                  | 161,591   |
| Subtotal                              | 343,209   |
| TOTAL DIRECT SUPPORT COSTS            | 2,661,831 |

# Annex II: Summary of Log Frame Madagascar PRRO 200065

| Results-Chain (Logic Model)   | Performance Indicators  | Risks, Assumptions  |  |  |
|---|---|---|--|--|
| STRATEGIC OBJECTIVE 1: SAVE LIV   | STRATEGIC OBJECTIVE 1: SAVE LIVES AND PROTECT LIVELIHOODS IN EMERGENCIES  |   |  |  |
| SO1 - Goal 1: To save lives in emergency and reduce acute   | nalnutrition caused by shocks to below emergency levels.  |   |  |  |
| SO1 - Goal 2: To protect livelihoods and enhance self-reliar  | ce in emergencies and early recovery  |   |  |  |
| <b>Outcome 1.1:</b> Reduced or stabilized acute<br>malnutrition in children under 5 in<br>targeted emergency-affected populations | <ul> <li>Prevalence of acute malnutrition among children<br/>under 5 (weight-for-height as %)</li> <li>Target: To decrease and keep GAM levels below 10%</li> </ul> | <ul> <li>Effective coordination between MOH, partners and WFP to provide nutrition rehabilitation to targeted women and children</li> <li>Possible reduction of MOH efficiency due to budget restraints if current political situation is not solved</li> </ul> |  |  |

| Results-Chain (Logic Model)   | Performance Indicators   | Risks, Assumptions   |
|---|--|--|
| <b>Output 1.1:</b> Food distributed in sufficient<br>quantity and quality to targeted women<br>(PLW), girls and boys under secure<br>conditions | <ul> <li>Number of women (PLW), girls and boys<br/>receiving food by category and as % of planned<br/>distribution</li> <li>Target : 100%</li> <li>21,600 (children below 5 of age),</li> <li>5,400 Pregnant and Lactating Women.</li> </ul> | <ul> <li>Timely delivery of commodities</li> <li>Availability of capable cooperating partners in newly affected areas</li> </ul> |
|   | <ul> <li>Tonnage of food distributed, by type, as<br/>% of planned distribution</li> <li>Target: 100%</li> <li>Timely provision of 1,094 mt (Oil: 122 mt; CSB+: 972 mt).</li> </ul>  |  |
|   | <ul> <li>Quantity of fortified foods,<br/>complementary foods and special<br/>nutritional products distributed, by type,<br/>as % of actual distribution.</li> <li>Target: 100%</li> <li>1,094 mt of fortified food distributed</li> </ul>   |  |
| Outcome 1.2: Improved food consumption<br>over assistance period for targeted<br>emergency-affected households                                  | <ul> <li>Household food consumption score<br/>Target: At least Borderline Food Consumption Score (FCS&gt;=21.5) up<br/>to 80% of targeted households</li> </ul>  | <ul> <li>Adequate and timely availability of resources</li> <li>Access to shock affected areas</li> </ul>                        |

| Results-Chain (Logic Model)  | Performance Indicators   | Risks, Assumptions  |
|--|--|---|
| <b>Output 1.2:</b> Food distributed in sufficient<br>quantity and quality to targeted women,<br>men, girls and boys under secure<br>conditions | <ul> <li>Number of women, men, girls and boys<br/>receiving food by category and as % of planned<br/>distribution<br/>Target 100%</li> <li>General Food Distribution for 339,200 people</li> </ul> |   |
|  | <ul> <li>Tonnage of food distributed, by type, as<br/>% of planned distribution</li> <li>Target: 100%</li> </ul>   |   |
|  | Timely provision of 15,371 mt (Rice: 7,605 mt; Maize:4,066 mt; Pulses: 2,594 mt; Oil:1,029 mt; HEB: 198 mt)  |   |
| <b>STRATEGIC OBJECTIVE 3: RESTORE</b>  | AND REBUILD LIVES AND LIVELIHOODS  | IN POST-DISASTER SITUATIONS   |
| SO3 - Goal 2: To support the re-establishment of livelihood  | s and food and nutrition security of communities and families affect   | ed by shocks  |
| Outcome 3.1: Adequate food consumption<br>over assistance period for targeted<br>households  | <ul> <li>Household food consumption score<br/>Target: Acceptable Food Consumption Score (FCS&gt;=35) up to 80% of<br/>targeted households.</li> </ul>  | <ul> <li>Adequate and timely availability of resources</li> <li>Access to shock affected areas</li> </ul> |

| Results-Chain (Logic Model)  | Performance Indicators  | <b>Risks, Assumptions</b> |
|--|---|---------------------------|
| <b>Output 3.1:</b> Food distributed in sufficient<br>quantity and quality to targeted women,<br>men, girls and boys under secure<br>conditions | <ul> <li>Number of women, men, girls and boys receiving food by category and as % of planned distribution.</li> <li>Target 100%</li> <li>Food For Work for 269,800 people</li> <li>Tonnage of food distributed, by type, as % of planned distribution</li> <li>Target: 100%</li> <li>Timely provision of 16,331 mt (Rice: 5,760 mt; Maize: 8,628 mt, Pulses: 1,943 mt)</li> </ul> |                           |

# ANNEX III – List of Acronyms Used in the Document

|        | A driventist Devisionment and Delief A senses                       |
|--------|---|
| ADRA   | Adventist Development and Relief Agency                             |
| CARE   | Cooperative for Assistance and Relief Everywhere                    |
| CFSVA  | Comprehensive Food Security and Vulnerability Assessment            |
| CP     | Country Programme   |
| CRGRC  | Regional Disaster and Risk Management Council                       |
| CRIC   | Comité de Réflexion des Intervenants en Catastrophe                 |
| CRS    | Catholic Relief Services  |
| CSB    | Corn-soya blend   |
| DHS    | Demographic and Health Survey                                       |
| DRM    | Disaster and Risk Management  |
| EDP    | Extended Delivery Point   |
| EFSA   | Emergency Food Security Assessments                                 |
| EU     | European Union  |
| FANTA  | Food and Nutrition Technical Assistance Project                     |
| FFW    | Food for work   |
| FID    | Fonds d'Intervention pour le Developpement                          |
| FLA    | Field level agreement   |
| GAM    | Global acute malnutrition   |
| GFD    | Global food distribution  |
| IASC   | Inter-Agency Standing Committee                                     |
| IFAD   | International Fund for Agriculture Development                      |
| MAM    | Moderate and Acute Malnutrion                                       |
| M&E    | Monitoring and Evaluation   |
| MAP    | Madagascar Action Plan  |
| MOH    | Ministry of Health  |
| MOSS   | Minimum Operational Security Standards                              |
| MUAC   | Mid-Upper Arm Circumference   |
| MYAP   | Multi-year Assistance Program                                       |
| NGO    | Non-governmental organization                                       |
| NNP    | National Nutrition Policy   |
| NSDM   | National Strategy for Disaster Management                           |
| OCHA   | Office for the coordination of humanitarian affairs                 |
| ONN    | National Nutrition Office   |
| PNAN   | Plan of Action for Nutrition  |
| PRRO   | Protracted relief and recovery operation                            |
| PRSP   | Poverty Reduction Strategy Paper                                    |
| SALOHI | Strengthening and Accessing Livelihoods Opportunities for Household |
|        | Impact  |
| SAP    | Systeme d'Alerte Precoce  |
| SDA    | Secondary Data Analysis   |
| SO     | Strategic Objective   |
| SMART  | Standardized Monitoring and Assessment of Relief and Transition     |
|        | (Survey)  |
| UNDP   | United Nations Development Program                                  |
| UNICEF | United Nations Children's Fund                                      |
| USAID  | United States Agency for International Development                  |
| VAM    | Vulnerability analysis and mapping                                  |
| WFP    | World Food Programme  |
| WHO    | World Health Organization   |
| .,     | ······································                              |

na (lha na) Intal Marovoay canierana-Ivondo bato-Boi o Atsi /ate na Rural atondra zaka Toamasi ats Betafo Maha varika ud kara lien Food Insecurity (%) 0 - 4 5 - 13 Ampanihy 14 - 29 Ambovombe 30 - 50 Beloha 51 - 67

# ANNEX IV – Prevalence of food insecurity in Madagascar