Safe Access to Firewood and alternative Energy in the North of Sri Lanka: An Appraisal Report

16 May – 5 June 2010

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Acknowledgements

The author, on behalf of the mission team, wishes to thank all who have contributed to the development of this report. They have given generously of their time, expertise and experience. More specifically, significant contributions and support was provided by WFP staff in the country office, and in the sub-offices in Jaffna and Vavuniya.

Special thanks to all the men and women who openly shared their experiences, concerns and needs with us, for their warmth in welcoming us in their villages and their smiles.

Table of Contents

List of Acronyms

ARECOP	Asian Regional Cookstove Programme
CAA	Consumer Affairs Authority
C/SHA	Confirmed/Suspected (mine) Hazardous Areas
COPD	Chronic Obstructive Pulmonary Disease
DDG	Danish Demining Group
DMAO	District Mine Action Office
DP	Development Programme (WFP)
DS	District Secretary
EFSA	Emergency Food Security Assessment (WFP)
ERW	Explosive Remnant of War
FFT	Food for Training (WFP)
FFW	Food for Work (WFP)
FGD	Focus Group Discussion
GA	Government Agent
IASC	Inter Agency Standing Committee
ICG	International Crisis Group
IDB	Industrial Development Board of Ceylon
IDEA	Integrated Development Association
IDMC	Internally Displaced Monitoring Centre
IDP	Internally Displaced People
IOM	International Organization for Migration
LPG	Liquefied Petroleum Gas
LTTE	Liberation Tigers of Tamil Eelam
MAG	Mine Advisory Group
MENR	Ministry of Environment and Natural Resources
MNBEID	Ministry of Nation Building and Estate Infrastructure Development
MRDRS	Ministry of Resettlement and Disaster Relief Services
MRE	Mine Risk Education
NERD	National Engineering Research & Development Centre
NFI	Non-Food Item
NFZ	No Fire Zone
NGO	Non-Governmental Organization
NSCMA	National Steering Committee on Mine Action
OEDP	Humanitarian Policy and Transition (WFP)
PRRO	Protracted Relief and Recovery Operations (WFP)
SAFE	Safe Access to Firewood and Alternative Energy
SFD	Swiss Foundation for Demining
TOT	Training of Trainers
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNMAS	United Nations Mine Action Survey

UNOCHA	United Nations Office for Coordination of Humanitarian Affairs
UNOPS	United Nations Office for Project Services
UXO	Unexploded Ordnance
VGF	Vulnerable Group Feeding
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

In 2007 WFP agreed to co-chair the Inter-Agency Standing Committee (IASC) Task Force on Safe Access to Firewood and Alternative Energy in Humanitarian Settings (SAFE) together with UNHCR and the Women's Refugee Commission (which worked under the authority of InterAction). Participation in the SAFE Task Force triggered a global analysis of the protection challenges associated with the collection, provision and use of fuel for cooking – activities closely related to WFP's core mandate. As a result, WFP strengthened its commitment to work in partnership with other relevant actors to promote safe access to cooking fuel in humanitarian settings.

Following the launch of the SAFE guidance material in April 2009, WFP decided to undertake a series of feasibility studies in countries where fuel scarcity is negatively affecting WFP beneficiaries. The purpose of these studies is to better understand how beneficiaries, particularly displaced population, are coping with fuel scarcity and the related consequences, to take stock of existing responses by both WFP and partners, and to propose a comprehensive approach that addresses human and environmental protection, livelihoods, food and nutrition. To date, missions have been conducted in North Darfur (Sudan), Uganda, Haiti and Sri Lanka, while additional missions have been planned for Kenya and Ethiopia.

1.1 Main Findings

Firewood is by far the most widely used energy-source for domestic cooking in Northern Sri Lanka, often complemented with coconut shells and palmera leaves. Firewood is mostly collected, especially in rural areas, while in few instances informants reported resorting to buying it.

In conflict-affected North of Sri Lanka, firewood collection if one of the risk-taking activities that may lead to mine/unexploded ordnance UXOs incidents. Un-cleared landmines and ordnance severely disrupt returnees' lives and livelihoods, confining them in the small perimeter of residential areas. They prevent access to reconstruct homes, roads, schools and other essential services and goods, such as firewood for domestic cooking. Fear of landmines and ERW, not just the actual threat, significantly constrains people's access to cooking fuel.

In spite of a general low number of recorded incidents[1], representatives of demining organizations as well as others expressed concerns for a potential rise in the near future, also in relation to firewood collection. There is evidence of increasing reckless behaviour by returnees due to a combination of "false" confidence in their capacity to identify and avoid the risk; distorted perception of the risk itself, i.e. people remembered the location of areas of risk of landmines and UXOs as they were prior to their displacement; and the increased need to resort to normal every-day activities.

[1] See the figures reported in the protection section below.

Indoor air pollution, and its health-related implications, is another worrisome outcome of the use of firewood for domestic cooking. Evidence[2] shows that most returnees cook in the same place where they sleep, as they lack both the resources and the space to cater for a separate kitchen. Cooking with a stove helps reducing the pollutant emissions, thus decreasing the risk of respiratory problems.

WFP is the only agency that has been tackling the issue of cooking fuel in the North. Through distribution of energy-efficient *anagi* stoves in Menik Farm, WFP helped IDPs meeting their fuel needs, while mitigating their risk. At the same time, in the framework of its climate adaptation and disaster mitigation strategies, WFP has been supporting the Sri Lankan Forest Department (Ministry of Environment) to protect and regenerate the national forest resources through tree planting and water conservation systems, while also addressing the firewood need of the population.

Finally, to reduce the burden on family and school children, an agreement has been signed with UNOPS for the construction of energy saving stoves[3] in some WFP-assisted schools throughout the North and the East of the country.

1.2 Proposed approach

Building on the success of past initiatives undertaken at the country office level, WFP plans to fully integrate cooking energy needs in the assistance provided to conflict-affected returnees in the North. Activities include the distribution of *anagi* stoves to at-risk returnees, implementation of energy-efficient stoves in schools, and FFW for the regeneration of the forest cover. Priority will be given to heavily mined areas with the objectives of reducing the need for firewood for cooking, while engaging communities in environment restoration and conservation initiatives.

Additionally, WFP in collaboration with UNICEF and the Sri Lankan Industrial Development Board (IDB) plans to promote the establishment of stove production centres in targeted locations throughout the North. Besides addressing the future needs of the resettling population, these centres could provide ideal income-generating opportunities to particularly vulnerable individuals such as people with injuries, disabled and female heads of households.

All these activities will serve as an entry point for education and awareness raising on mine risk to be done jointly with UNICEF. Meanwhile, targeting returnees with the *anagi* stove will contribute a concrete step towards moving from risk prevention to risk reduction approach in the North.

[2] This is based on observations by the team and discussions with both displaced and returnee population in Northern Sri Lanka.
[3] At the time of the mission, WFP in partnership with UNOPS was considering the construction of the Lorena Rocket stove in schools. However, discussions are still underway on the best model to be implemented at the institutional level.

2 Introduction

2.1 Background

The World Food Programme (WFP), the Women's Refugee Commission (working under the authority of InterAction), and the UN High Commissioner for Refugees (UNHCR) co-chaired the InterAgency Standing Committee Task Force on Safe Access to Firewood and Alternative Energy in Humanitarian Settings (IASC Task Force SAFE) from 2007 to 2009. Its purpose was "*to reduce exposure to violence, contribute to the protection of and ease the burden on those populations collecting wood in humanitarian settings worldwide, through solutions which will promote safe access to appropriate energy and reduce environmental impacts while ensuring accountability*."

During its time as co-chair of the Task Force, WFP conducted a survey of more than 20 countries across Africa, Asia and the Americas to map out how firewood and cooking fuel have an impact on food and nutrition. The survey revealed that people often resort to negative coping mechanisms to cook WFP food. These include forcing women to collect firewood in dangerous environments, exposing them to rape and other forms of gender based violence; under-cooking food to save on fuel; and/or selling part of their rations to buy firewood or pay for milling costs.

In addition to exposing people to violence – especially women and young girls – these coping mechanisms are in many cases limiting the intake and nutritional absorption of WFP rations, reducing the impact of food assistance on relieving hunger and fighting under-nutrition.

Harvesting firewood for cooking fuel can also contribute to deforestation and the loss of important natural resources. In addition to the increased distance women and children have to travel to find available firewood and the increased exposure to risk of attack, environmental degradation also limits long-term livelihood opportunities in agriculture and forestry. As the linkages between climate change and food insecurity become more evident, the sustainable use of forests and natural resources is more critical.

WFP's interest and involvement in ensuring safe access to appropriate cooking fuel has many facets: protection and safety of beneficiaries; effectiveness of food and nutrition interventions; and mitigation of and adaptation to climate change.

To address these challenges, WFP decided to undertake a series of feasibility studies in countries where fuel scarcity is negatively affecting WFP beneficiaries. The purpose of these studies is to understand how beneficiaries are coping with fuel scarcity and the related implications; to take stock of existing responses by both WFP and partners; and to propose a comprehensive multi-sectoral approach to addressing cooking fuel needs that addresses human and environmental protection and recovery, livelihoods, food and nutrition.

This report provides the basis for a WFP project on safe access to firewood and alternative energy in the Vanni Region[4], Sri Lanka.

[4] The Vanni consists of the five administrative districts designated by the government – the entire area of Kilinochchi and Mullaitivu Districts, and part of Vavuniya, Mannar and Jaffna Districts.

2.2 Methodology

Prior to the mission to Sri Lanka, the team[5] undertook a preliminary review of relevant literature, including situational reports and analyses, food security and household energy assessments, and relevant WFP project documents. The SAFE framework of analysis and related set of questions (developed and used in the previous feasibility studies) were also applied in Sri Lanka.

During the mission, meetings were conducted with WFP country and sub-office staff as well with a wide range of relevant stakeholders such as UN agencies, NGOs, and government representatives. The study involved extensive consultations with beneficiaries throughout the North of Sri Lanka. More specifically, focus group discussions and household-level interviews were conducted in various divisions across Jaffna, Mullaitivu, Kilinochchi, and Vavuniya districts[6]. Camp-visits were limited to Menik Farm (Zone 2 and 4) in Vavuniya district. Finally, the information in this report was complemented by additional studies and reports as well as technical data gathered during the mission.[7]

The specific focus of the mission was to better understand the situation with regard to access to cooking fuel in selected resettlement sites as well as to assess the uptake and use of the *anagi stove* distributed by WFP to some IDPs during their staying in Menik Farm.[8] Timing of the mission was particularly crucial as IDPs resettlement process is ongoing and access to cooking fuel in areas of origin is constrained by landmines and UXO contaminations. Moreover, the more the people being resettled, the less the resources available in the surrounding of residential areas, the higher the likelihood of reckless behaviour searching for and accessing firewood for cooking.

The mission was conducted in combination with a series of workshops on protection in WFP's operations targeted to staff and government counterparts in five districts.[9] Findings from this study are intended to inform a strategy to address cooking fuel needs of returnees, while contributing to human and environmental protection.

2.3 Context overview

Sri Lanka is a middle-income country located off the southern-east coast of India. 26 years of civil conflict and the strong impact of the 2004 tsunami had gravely affected the economic and social development of the country, and had hampered the lives and livelihoods of large parts of the population, particularly in the North.

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[5] The team comprised Mariangela Bizzarri, independent consultant who served as team leader, Pia Skjelstad, WFP Humanitarian Policy and Transition Unit (OEDP).
[6] See the itinerary in annex 1.
[7] These include data provided by the WFP's Emergency Food Security Assessment conducted in April 2010, as well as figures from the Mine Action Group, OCHA and the IDP Protection Working Group, and technical information on the *anagi* stove provided by the Sri Lankan Industrial Development Board of Ceylon (IDB).
[8] *Anagi stove* is a clay stove locally produced in Sri Lanka since 1986. WFP distributed 13,000 of this stove in Menik Farm in 2009-2010. For a more detailed description of this stove see section 5.1 *FES and Alternative Energy.*
[9] Workshops covered the districts of Jaffna, Kilinochchi, Mullaitivu, Vavuniya, and Mannar. For more details on the discussion points and recommended actions that resulted from the workshop see the report WFP (2010), *Sri Lanka Protection Training Summary & Recommendations, May 2010*.

The defeat of the Liberation Tigers of Tamil Eelam (LTTE) by government forces in May 2009[10], led to the displacement of hundreds of thousands of civilians, most of whom had been previously repeatedly displaced from LTTE-held areas.[11] Displacement reached its peak in August 2009 the large and sudden influxes of some 285,000 Vanni IDPs.[12] The Government established camps in the Northern and Eastern part of the country to accommodate the internally displaced people that had fled the conflict zones.

Although the resettlement started in August 2009, particularly for those IDPs who originate from the East, Jaffna and Mannar, it was only in November/December 2009 that releases started to rise and the process was significantly accelerated.[13] Moreover, in early December 2009 a pass-system was introduced by the Government to allow movement of IDPs in and out of the camps.[14] IDPs were reportedly appreciative of the new system as the pass provided them with an identification they could use to go through the check points, it granted access to basic services, and so on.[15]

The complexities of mine action operations also contributed to slower the resettlement process. In Sri Lanka, humanitarian demining is conducted by the Government, the UN and a group of international NGOs[16], and have been focused on facilitating the resettlement process. Non-technical surveys[17] are conducted to open access and demark risk areas. The main responsibility of releasing the land resides in the National Steering Committee on Mine Action (NSCMA), while final approval is given by Government Agents (GAs).[18]

At the time of the mission, the resettlement process was continuing at increased pace. Zone 5 in Menik Farm is used as a transit area where IDPs are provided with meals and sanitation facilities, while waiting for the necessary procedures to be finalized. Return is coordinated with the humanitarian community to ensure

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[10] The war was declared over on 18 May 2009, after the announcement of the death of Vellupillai Prabhakaran, leader of the LTTE.

[11] Exact figures are unknown. Evidence gathered by the International Crisis Group sets the figure at above 300,000 civilians in the Vanni when the first no fire zone (NFZ) was established by the Government on 21 January 2009. WFP estimated 250,000 IDPs in early February 2009, while the UN finally agreed on an amended scenario of nearly 300,000 IDPs in the North.
http://ochaonline.un.org/humanitarianappeal/webpage.asp?Page=1767

[12] UNOCHA (2009), *Common Humanitarian Action Plan for Sri Lanka 2009*, 21 July 2009.
http://ochaonline.un.org/humanitarianappeal/webpage.asp?Page=1767

[13] Ibid.

[14] Request should be presented to the relevant authority one day before. Once granted, a copy of the permit is given to the person. Meeting with UNHCR, 02.06.2010, Vavuniya.

[15] Ibid.

[16] The Mine Action Unit in UNDP supports the Government of Sri Lanka (National Steering Committee on Mine Action (NSCMA), chaired by the Ministry of Nation Building and Estate Infrastructure Development (MNBEID)) to coordinate and manage mine action, notably mine and UXO clearance in the country. Through its District Mine Action Offices (DMAOs) in Jaffna, Vavuniya and Batticaloa (sub-office that covers Mine Action in the East), the Mine Action Project supports the Government Agents (see below) to prioritize and assign mine/UXOs clearance tasks. The Sri Lanka Army and six INGOs: The Danish Demining Group (DDG), The HALO Trust, HORIZON, Mines Advisory Group (MAG), Sarvatra, and the Swiss Foundation for Demining (FSD) are involved in mine/UXO removal operation. http://www.undp.lk/What_We_Do/Pages/Mine_Action.aspx

[17] Non-technical survey describes the process of collecting information about new or already existing Confirmed and/or Suspected (mine) Hazardous Areas (C/SHA). Ideally through thorough information gathering and analysis, suspicions are removed and only confirmed areas are recorded in the database for clearance. United Nations Mine Action Survey (UNMAS) (2009), *IMAS 08.21, Non-Technical Survey*, First Edition, NYC.

[18] Government Agent (GA) and District Secretary (DS) are civil servants appointed by the central Government to govern a certain district of the country. The GA is the administrative head of public services in the District.

provision of the necessary assistance. OCHA representative reported receiving information about returnees, including number of families that registered with the GA and locations of return. If necessary, rapid assessments of the security situation in the areas of return are conducted by the UN prior to people's movement. Mine Risk Education (MRE) is provided by UNICEF through a network of community-based facilitators to IDPs both prior and after resettlement.

IOM, in cooperation with the Ministry of Resettlement and Disaster Relief Services (MRDRS), has been the lead agency responsible for organizing IDP returns, including chartering buses and trucks to transport IDPs and their belongings. IDPs are first transported to a holding centre, usually at the DS level from where their movement to their areas of origin is processed. During their stay at the holding centre, IDPs received cooked meals for three days, after which they are given a resettlement package.[19] Of particular relevance for this study is the fact that the cooking fuel needs of returnees are not considered in the package.

To date, resettlement has been higher in the areas west of the A9, the road that connects the central city of Kandy to Jaffna, while many areas in the east, where the fierce fighting took place near the end of the conflict, are still not open to return.[20]

As of June 2010, about 60,000 IDPs were still living in camps in Jaffna, Vavuniya and Mannar. Of this, the great majority (about 55,000) are still residing in Menik Farm, Vavuniya district. In addition, an estimated 25,000 people are still believed to live in host families, mainly in Vavuniya.[21] In May only, 29,728 returns were registered.[22] As part of the Government's resettlement plan, some 236,755 have already been returned to their homes. [23] A new deadline has been recently set by the Government of Sri Lanka for the resettlement of the remaining thousands of IDPs still living in camps and host families at August 2010.[24]

While access to conflict-affected areas increasingly improves, unexploded ordinances (UXOs) and landmines continue to pose challenges for returning populations and for the delivery of humanitarian aid. Restricted movement due to the risk of explosive remnants of war (ERW) results in difficulties in the resumption of local livelihoods such as fishing and farming, and in the confinement of the population in the perimeter of a few cleared residential areas. On the other side, population movements and access restrictions also pose serious challenges to mine risk awareness among IDPs.[25]

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[19] This in principles includes an initial cash payment of Rs.5,000 from Government; six months of food ration from WFP; kitchen utensils, NFI kit and Rs.25,000 cash grant all from UNHCR; hygiene kit from UNICEF; maternity kit for pregnant women from UNFPA; shelter material (including roofing sheets, poles) from IOM. WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p. 3.
[19] Ibid., p. vii.
[20] With the Government's advance, the LTTE withdrew northeast towards the coast of the District of Mullitivu where the last battles were fought.
[21] Interview with UNCHR, Head of Protection Unit, Vavuniya, 1 June 2010.
[22] Ibid.
[23] UNOCHA, *Common Humanitarian Action Plan May 2010*, data distributed during the IDP protection working group in Colombo, 3 June 2010.
[24] Previously the deadline was set in April, but later changed as not feasible.
http://www.irinnews.org/Report.aspx?ReportId=89342, retrieved 7 June 2010.
[25] Mine Action Sri Lanka, http://www.mineaction.org/country.asp?c=24, retrieved 10.06.2010.

2.4 Overview of WFP's assistance

WFP has been present in Sri Lanka since 1968. Activities range from food assistance to 1.2 million IDPs and other conflict, disaster and economically affected people in the North and East of Sri Lanka to nutritional support to 275,000 pregnant and lactating women and malnourished children in the South (Development Programme - DP).[26]

Currently, WFP is supporting the resettlement process through a six-month food ration (vulnerable group feeding, VGF) to returnees, while continuing assistance to IDPs in camps.

While the first groups of returnees are already phasing out of vulnerable group feeding, food-for-work (FFW) and food-for-training (FFT) activities ensure continuation of assistance to food insecure individuals to restore and rebuild their livelihoods through assets rehabilitation. Assistance to quickly resume agriculture and basic livelihood activities has been given the priority to reduce dependence and increase returns sustainability.

Groups that are severely affected by the conflict such as single-headed households, the disabled and the elders on the other side continue to be targeted under VGF.

Findings from a recent Emergency Food Security Assessment (EFSA) in the Vanni region confirmed high levels of food insecurity in all resettlement sites, and the needs for further food assistance until the next *maha* (cultivation) *season* (October-January). In fact, since the majority of the households were resettled between December 2009 and February 2010, most of the farmers missed the last cultivation season.[27] Moreover, according to the assessment, more than half of the households surveyed do not yet have access to paddy lands[28]; 60% do not have access to highland crop fields; and 46% to their home gardens, mainly due to the risk of landmines and UXOs.[29]

Of particular relevance to the present report, are some additional activities being undertaken by WFP to address the cooking needs of beneficiaries in the framework of climate change adaptation strategies through the distribution of energy-saving stoves in IDP camps. More information on this is provided in section 5 below.

3 An overview of the current situation with regard to fuel in Sri Lanka

This section analyses the main sources of cooking fuel, their availability and accessibility, including trade and prices throughout the North.

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[26] WFP (2010), *Executive Brief Sri Lanka*, Last Updated: 25 May 2010. https://mobile.wfp.org/+CSCO+ch756767633A2F2F71627068666762657 22E6A73632E626574+1394942045@7376896@1276009015@56F13EE35C617126CAC5D990256C1B2FF336507C+/stellent/groups/op_public/documents/research/wfp130134.pdf. WFP, *PRRO 107560 Food for Peace Building and Recovery in Conflict-Affected Areas*, Jan 2009-Dec 2010.

[27] WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p. 20.

[28] Paddy field is a flooded parcel of arable land used fro growing rice and other semi aquatic crops. http://en.wikipedia.org/wiki/Paddy_field, retrieved 21.06.2010.

[29] WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p. vii.

3.1 Firewood

99.9% of the households surveyed under the EFSA use firewood for cooking.[30] This was further confirmed by the visits and interviews conducted during the present mission both in camps and in resettlement sites. Very few women reported having used kerosene[31] as an alternative source of cooking energy. The situation does not differ significantly if we consider the country as a whole. According to Sri Lankan Department of Census and Statistics, 79.5% of the population relies on wood for cooking, while 17.1% and 2.4% uses gas and kerosene respectively.[32] Reliance on firewood diminishes in urban contexts.[33]

Firewood is often complemented with palm leaves and coconut shells, both widely available in all the areas visited.

Since cooking fuel represents only 0.3% of the overall household expenditures[34], it is reasonable to deduce that the majority of the firewood consumed at the household level is collected directly by family members. Women of all ages are the prime collectors of firewood. Distance to the collection points is not significant as wood is usually available in the surrounding. In addition, coconut shells and palmera leaves are used to complement firewood. However, access is constrained by landmine and UXOs contamination.

According to informants, in Sri Lanka a license is required to sell firewood. This, compounded with the fact that most households collect their own firewood, would explain the observed extremely low reliance on firewood as a source of income, even after the significant reduction of traditional livelihood opportunities that the conflict has caused. Moreover, illegal logging is not a major problem in Sri Lanka as it is in many countries.[35] Heavy military presence in the North also represents another major deterrent to any illegal activity.

While at first sight availability of firewood appears quite high throughout the North, access varies across the region and from camp settings to resettlement sites. Whereas in camps firewood was made available by the Government, in resettlement areas access to firewood is heavily constrained by the risk of landmines' and UXOs' explosion.

Price also varies. In Menik Farm some women reported paying 100-150 Rs (1-1,5 USD) for a bundle of 15 sticks[36], others said a bundle of 5 sticks was about 100 Rs (1 USD).[37] According to informants, firewood in Jaffna tends to be more expensive than in the rest of the Vanni, as it less available.

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[30] WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p.16.
[31] Kerosene was also referred to by women as a dangerous source of fuel due to an incident that occurred in Menik Farm with a kerosene lamp. Household interviews, Menik Farm, Vavuniya, 30.05.2010.
[32] UNDP/WHO (2009), *The Energy Access Situation in Developing Countries,* New York, p. 76.
[33] Ibid., p. 89.
[34] WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p. 23.
[35] Leases for wood harvesting and use are administered by the Government under the framework of the National Forestry Policy, which was approved in 1995. The Policy advocates for environment protection and conservation and sustainable forest management whilst meeting wood, raw material and bio-energy-requirements. http://en.wikipedia.org/wiki/Deforestation_in_Sri_Lanka#cite_note-2, retrieved 11.06.2010.
[36] According to informants, this bundle lasts for about 2-3 days cooking three meals per day for a family of 6-7. Household interviews, Menik Farm, Vavuniya, 30.05.2010.
[37] Women in the focus group discussion (FGD) referred to the price at which firewood was sold in Menik Farm and the difficulties in accessing it, mainly due to restriction of movement. Meeting with returnee women in Poonakery Division, Kilinochchi, 26 May 2010.

3.2 Liquefied Petroleum Gas (LPG)[38]

The LPG business in Sri Lanka is in the hands of the Royal Dutch Shell and the Sri Lankan company Laugfs Holdings, with Shell holding the highest LPG market share (about 80%).[39] Limited suppliers often equal limited distribution capacity and higher prices. This would explain the quite expensive cost of LPG in the country. [40]

According to informants a new 12.5 kg cylinder, which is the one used for domestic cooking, costs about 10,000 Rs (100 USD), while refilling varies across time and places. For example, some WFP colleagues in Vavuniya reported paying 1,800 Rs (18 USD) for refilling. The supply usually lasts for about 1-1.5 month depending on the family size. In addition to the gas, the cooker cost is also prohibitive to most, and ranges from 7,000 Rs (70 USD) for a one fire to 15,000 Rs (150 USD) for a two fires cooker.

While in Sri Lanka, LPG price is regulated by the Consumer Affairs Authority (CAA), being a by-product of refined crude oil, variations in the global price of crude oil also determine the price of LPG in the country.

None of the beneficiary households interviewed in the North reported using LPG. Besides high upfront costs, another barrier to LPG adoption could be the limited availability of dealers in rural areas.

If compared with the costs of buying firewood for 1 month and a half, LPG refilling would generally be more convenient. As said, however, the upfront costs of the new cylinder and the cooker, compounded with the fact that for most households firewood is free of charge, still makes LPG unaffordable and unattractive to most.

4 Implications of the collection, supply and use of cooking fuel in Sri Lanka

This section explores the concerns associated with the collection, supply and use of cooking fuel in the North of Sri Lanka. More specifically, emphasis has been placed on the following facets: protection and safety of beneficiaries while searching for and using firewood; and natural resources regeneration and management. These aspects have been selected for their relevance to WFP's programming and as entry points for possible future interventions by the organization. Differently from other settings, in Sri Lanka firewood collection does not appear to be a major livelihood option, not even in times of crisis, thus dependency on it as a source of income is not amongst the issues discussed below.

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[38] LPG is a hydrocarbon gas popularly used as cooking fuel in many rural areas and developing countries. It comes in portable canisters of varying size, which can be re-filled from a main tank or at a refill station. LPG is typically well liked by its users, as it burns very cleanly (much more so than kerosene) and the temperature can be easily adjusted. In many areas, LPG is considered a high-status fuel. However, it is a pressurized gas and as such can be dangerous if improperly stored or used. Significantly safety and usage trainings and awareness-raising on risks associated with the use of gas-based fuels are required if LPG is to be introduced to populations that are not familiar with them. In areas where LPG is not locally produced, it is quite expensive. Transportation, storage and distribution costs can add to the total price. Source: SAFE TOT Trainers' Guide. For additional information on LPG's origin, production and uses refer to: http://en.wikipedia.org/wiki/Liquefied_petroleum_gas.

[39] http://www.shell.lk/, retrieved 10.06.2010.

[40] Data from Shell indicate that 30% of the population in Sri Lanka use LPG. Ibid.

4.1 Protection risks during firewood collection

26 years of almost unabated conflict in the North left most of the territory inaccessible. Exposure to landmines and UXOs is the prime protection risk faced by the resettled population, severely impacting their lives and livelihoods, including access to cooking fuel. Civilians are particularly exposed to landmines and unexploded ordnances due to their hidden nature and unpredictable targeting. Moreover, they require long time to be identified and detonated/removed to cease being a threat.

In spite of a general low number of recorded incidents[41], representatives of demining organizations as well as others expressed concerns for a potential rise in the near future. The reasons being threefold: 1. The higher the number of returnees, the greater the need to venture outside cleared areas for everyday activities such as fetching water, sand[42], and firewood; 2. There is evidence of reckless behaviour on the side of some returnees due primarily to (false) confidence regarding their capacity to identify and avoid mines and UXOs, and to the (false) perception of areas of risk, which often dates back to the period prior to their displacement[43]; 3. With aid support diminishing, returnees increasingly need to resort to traditional livelihood activities such as farming, paddy cultivation, and fishing, thus exposing themselves to a greater risk vis-à-vis landmines and UXOs.

While existing information does not indicate firewood collection as the number one factor of risk of explosion, it is however the one activity people undertake on (almost) a daily basis, regardless to the risk. Equally important is the perception and fear people have of landmines and UXOs. This, not just the actual threat, has the potential of significantly constraining people's access to firewood. For example, a survey conducted by MAG in a village in Mannar district, indicated firewood collection amongst the three activities where fear of ERW is greatest.[44]

Importantly, cooking fuel was never included in the assistance provided to either IDPs or returnees. Some informants reported that at the time of the establishment of IDPs camps in Vavuniya (May 2009) a conscious decision was made by donors and humanitarian organizations alike not to engage in the provision of cooking fuel as priority was given to life saving activities.[45] Thus, the responsibility of ensuring access to cooking fuel was left in the hands of the Sri Lankan Government. Just to cite one example, the clearing of land in Menik Farm resulted in the cutting of hundreds of trees, which were left at disposal of the displaced populations in different areas within the camp. A year later, this still represents the main source of cooking fuel people in camps rely on, though the large influx of IDPs in July/August 2009 and the transition from communal to individual cooking have significantly reduced its availability.

Finally, other dangers people face while searching for firewood are snakes, insects and wild elephants.

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[41] According to the UN Mine Action database 17 incidents were recorded in 2009 for a total of 25 victims, and 6 in 2010 affecting 13 people. Data provided by the District Mine Action Office, Vavuniya, 02 June 2010.
[42] According to MAG, sand is in high demand as many returnees are engaged in the reconstruction of their houses.
[43] For example, some people reported venturing into unsafe areas after seeing others doing the same. Meeting with MAG, Vavuniya, 1 June 2010.
[44] MAG (2010), *Needs Assessment – Sinnapandivirichchan Village, Madhu GN Division*.
[45] Meeting with UNHCR, Vavuniya, 02.06.2010.

4.2 Environmental impact

Firewood represents a critical need for the Sri Lankan population, which however puts tremendous pressure on the environment surrounding villages and IDPs settlements.

Deforestation is one of the most serious environmental issues in Sri Lanka. During the years from 1990-2005, Sri Lanka registered one of the highest deforestation rates in the world.[46]

In the North of the island, 26 years of civil war have led to large-scale forest clearing. Hundreds of hectares of rainforests have been destroyed by both parties to the conflict as they were providing refuge to the enemy during the time of fierce fighting.

Since return started, not only will a growing population in resettlement sites demand more fuel, they will also place a higher demand for housing reconstruction materials with wood, thus adding pressure on the remaining forest cover.

Firewood collection is not the only (nor perhaps the major) cause of deforestation. Other significant factors include agriculture and plantation, including tea, and timber production. However, while the National Forest Policy (1995) regulates the commercial harvesting and use of wood in Sri Lanka, there is at present no such control for individual harvesting of firewood for household consumption.

Direct negative implications of deforestation include flooding, landslides and soil erosion, further straining a country that is already prone to natural disasters. According to the Minister of Environment and Natural Resources (MENR), in 2009 the country has lost 15 percent of its agricultural harvest due to unexpected floods, and 20% as a result of drought.[47]

The cumulative effects of deforestation and related environmental degradation, and natural disasters further hamper the food security of the communities that WFP works with.

4.3 Implications for food, nutrition and health

In all the households visited cooking was mostly done indoor. Prior to displacement women reported having a cooking space separate from the rest of their houses, which reduced the risks of fire and smoke hazards. This for most is no longer possible. While a few managed to add some tarpaulin in front of their tents to create a small cooking space, the majority of both the IDPs in camps, and those living in temporary shelters in resettlement sites have neither the resources nor the space to cater for a separate kitchen.

Hence, many women lamented the excessive smoke caused by cooking inside their tents/temporary shelters, and the potential risks of hazards if fire is not adequately protected from the wind.[48] This was less of an issue for those who managed to

[46] In that period the country lost more than 35 percent of its old-growth forest cover, while total forest cover was diminished by almost 18 percent. http://rainforests.mongabay.com/20srilanka.htm, retrieved 11.06.2010.
[47] WFP (2009), *Annual Report Sri Lanka,* p. 24.
[48] Issues reported by women in Menik Farm and other focus group discussions in resettlement sites in Kilinochchi and Mullaitivu Districts.

reinstate back into their houses. Despite the damage to many houses, there still is often a cooking area separate from the rest of the living space.[49]

Indoor air pollution is a major cause of respiratory infections such as asthma, coughing, and even death worldwide. There is good evidence linking smoke from solid fuel use with three important diseases - child pneumonia, chronic obstructive pulmonary disease (COPD), and lung cancer.[50] Worldwide almost two million deaths annually from pneumonia, chronic lung disease, and lung cancer, especially women and children, are associated with exposure to indoor air pollution resulting from cooking with biomass and coal.[51]

Being aware of the adverse health implications of smoke, many women built mud stoves, the technology of which was handed down to them from past generations.[52] The research team observed many different models of self-made fuel-efficient stoves in both camps and resettlement sites, with various degrees of pollutant emissions reduction capacity. User behaviour can further impact the overall efficiency and emissions of the stove. For example, one woman built a stove that includes small pot rests on the top rim of the stove (where the pot sits) to allow for improved air circulation that leads to less smoke. Overall, most women interviewed were aware of the basics of household energy efficiency and how to reduce the level of smoke.

As far as food and nutritional intake is concerned, contrary to other settings, in Sri Lanka there was no indication of beneficiaries resorting to undercooking WFP food to save on fuel or selling part of their ration to buy firewood.

Selling food to cover for other needs is a practice widely observed in Menik Farm, to the point that recently the GA in Vavuniya issued a ban to selling relief food.[53] Women explained that in the absence of alternative livelihood options, food selling allows them to buy additional goods such as milk powder for their children and other complementary foods. The commodities that are sold most frequently are rice, wheat flour and dahal. [54] Yet, selling food to buy firewood was mentioned only as a possibility should the wood currently available in the camp exhaust.[55]

The fact that limited access to cooking fuel is at present not compromising the nutritional intake of WFP food is further confirmed by the data reported in the recent EFSA according to which the food consumption level of households in return areas is acceptable, i.e. family members are able to meet their nutritional needs.[56]

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[49] This situation for example was observed by the mission team in Kilinochchi town and in Sanna Salambam Village, Oddusudan Division, Mullaitivu District.
[50] UNDP/WHO (2009), *The Energy Access Situation in Developing Countries,* New York, p. 22.
[51] Ibid, p. 2. For information on the situation in Sri Lanka with regards to health issues associated with solid fuel use see page 55.
[52] Meeting with women throughout the North.
[53] According to informants the ban came after a series of measures adopted by the military to monitor the movement of food in and out Menik Farm. Meeting with OCHA representative in Vavuniya, 1.06.2010.
[54] According to some informants, dahal is sold as it needs to be grained and there is a lack of grinding facilities in the camp. Household interviews, Menik Farm, Vavuniya, 30 May 2010.
[55] Firewood availability in Menik Farm varies depending on the zone. However, since resettlement is ongoing and many women left the anagi stove at disposal of other IDPs, the SAFE team felt there was no need for additional activities to tackle this issue.
[56] WFP (2010), *Emergency Food Security Assessment Report Vanni Districts, Sri Lanka*, April 2010, p. 30.

5 Existing fuel-related responses

This section of the report analyses some key fuel-related interventions undertaken by various humanitarian actors in response to the concerns outlined above. It is not intended to be an all-inclusive account of all fuel-related projects currently in place in Northern Sri Lanka, rather it provides an overview of the major initiatives, their opportunities and challenges, to determine options for future programming.

5.1 FES and alternative energy

Sri Lanka has a long history of stoves use. There are indications that improved types of wood stoves have been in use long before the introduction of the *anagi* stove in 1986.[57] This was largely confirmed by interviews with both IDPs and returnees.

In all the sites visited the majority of women use stoves for cooking, while only a few resorted to the three stone fire as a temporary solution during displacement. When asked who taught them how to make the stoves, all of them pointed to the fact that the technology and skills were known for generations.

According to some studies,[58] while the traditional three-stone fires use only 15% of the energy given off by the wood, a simple mud stove, when used correctly, can increase the energy efficiency rate by at least 20% (i.e. 35% of the fuel energy is used to cook). [59] Moreover, the carbon footprint of mud stoves, even the most basic models, is lower than traditional open fires, where about 85% of the fuel turns into harmful smoke and heat radiation, thus contributing to indoor air pollution and overall global warming.[60]

Stoves, including the self-made simple mud stoves, have the advantage of using fuel more efficiently and emit less black carbon. Therefore, reducing the amount of black carbon emissions through the use of energy-efficient/low-emission cookstoves can have significant benefits on both health and the environment. As already mentioned, contrary to other settings, women in Northern Sri Lanka are well aware of these advantages.

WFP, recognizing the fact that firewood is a critical need, which however have adverse impacts on the environment, particularly in areas surrounding camps, started the distribution of energy-saving clay stoves to IDPs in Menik Farm in 2009. The locally-produced *anagi*[61] stove was first introduced in Sri Lanka in 1986 by the Ceylon Electricity Board under the Urban Stoves Programme. Its success prompted commercialization in the rural areas by the Integrated Development Association (IDEA) and the ITDG (now Practical Action).[62] Additional funds from the Asian

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[57] http://www.hedon.info/BP15:SriLankanStovesPastAndPresent, retrieved 16.06.2010.
[58] UNHCR (2002), *Cooking Options in Refugee Situations – A Handbook of Experiences in Energy Conservation and Alternative Fuels*, Geneva: UNHCR.
[59] According to some studies, the actual savings could be up to 50%, if stoves are used correctly and consistently, depending on the type of stoves and availability of proper cooking utensils.
[60] It has been proven that decreasing carbon emissions, for example, by using fuel-efficient stoves, would be a relatively inexpensive way to contribute to the mitigation of global warming. New York Times, "Third-World Stove Soot is Target in Climate Fight", April 16, 2009.
[61] In Sinhala language *anagi* means precious or excellent.
[62] IDEA is a Sri Lankan based NGO established in 1991 to promote commercialization of improved stove in partnership with the British NGO Practical Action/ITDG and capacity building to implement the stove programme at the household level with the aim to improve indoor air pollution. On the success of the *anagi* stove refer to: http://www.hedon.info/BP26:SriLankasRuralStoveProgramme.

Regional Cookstove Programme (ARECOP) allowed distribution to remote areas where access to commercialization networks was absent.[63]

Anagi is a two pot single-piece clay stove (picture below) designed to meet the cooking needs of a family of six. It can be used with firewood and other loose biomass residues such as coconut shells and palm leaves, widely used in the rural Sri Lanka. The design has been developed to suit the cooking habits and the types of food typically cooked in Sri Lanka. Laboratory tests carried out on the stove indicate a technical efficiency of 21%, while cooking tests indicate average firewood saving of over 30%. According to the producer the lifetime of the stove is about 3 years if it is used with insulation, i.e. additional clay/mud cover.[64]

Figure 1. Photo by Mariangela Bizzarri, Menik Farm, May 2010.

At the time of the mission, WFP had distributed 13,167 stoves out of a total purchase of 50,000.[65] Distribution took place in targeted zones in Menik Farm on a first come first served basis.[66] The original plan was to provide IDPs with something that they could bring along during resettlement. Very few however, took the risk of transporting the stove to their areas of origin as they felt it was too fragile and it was going to break. The majority preferred leaving it in the camps at the benefit of other women who were not originally targeted.

In resettlement sites, firewood collection is one of the risk-taking activities that may increase the risk of mine/ERW incidents. Thus the use of stove has become an effective risk reduction strategy as it decreases the time spent collecting firewood into heavily contaminated areas in the North thus contributing to the safety of the large number of returnees.

For this reason, WFP decided to target the remaining stoves to returnees in resettlement areas. Priority will be given to heavily mined areas to reduce the need for firewood collection of at risk population.

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[63] Two-pager on *anagi* stove, provided by WFP CO Colombo.
[64] Ibid.
[65] The project was funded by the Government of Luxemburg, which contributed additional funds for the construction of energy-saving stoves in WFP-assisted schools. The unit cost of the stove including transport is about 2 USD. WFP (2009), *Annual Report Sri Lanka,* p. 25. While WFP purchased 50,000, limited production capacity in-country significantly delayed the distribution process to the point that only 13,000 have been distributed so far.
[66] According to WFP zones initially targeted were those that first transited from communal to individual cooking.

Women who experienced using the stove reported easy uptake and usage, and high level of efficiency both in terms of firewood consumed and cooking time. They measured the saving by the fact that they were able to cook two things at once with the same amount of firewood. Reduction in hazards of kitchen smoke leading to an improvement in health is another mentioned benefit.

On the other hand, women did not specifically mention portability as an added value. One reason could be that the journey back to the areas of origin is so long and cumbersome that the stove is perceived as an additional burden, especially when there is no guarantee that it will remain intact. Another reason why portability was not particularly valued is probably women's preference for indoor cooking. Practice shows that despite the lack of an adequate cooking area, women continue cooking indoor, even when provided with the *anagi.* Amongst the reasons being mentioned were the wind, the rain and hygiene, as well as habits.

It is important to note however, that in spite of the above, all women in resettlement sites express their interest in being provided with the *anagi* stove.

To date, the main challenge faced by WFP in the distribution of the *anagi* stove is the limited supply/production capacity available in country. *Anagi* is produced through a network of cooperatives mainly located in the central district of Karunegala. Cooperatives, and small-potters therein, are supported by the Industrial Development Board of Ceylon (IDB), which operates under the Sri Lankan Ministry of Rural Industries ad Self-Employment Promotion. Assistance includes training and technology transfer and provision of key machineries.[67] Despite a stated production capacity of 1,000 stoves a month per each skilled potter,[68] and the boost provided by WFP's purchasing power to the strengthening and the enhancement of the production network, production has been limited.

Another challenge that needs to be addressed relates to the fragility of the stove. According to the IDB, the *anagi* can be made more resistant (and more efficient) if insulated with a mixture of additional mud and clay.

5.2 Institutional FES

WFP started its school meals programme in Sri Lanka in 2003. The programme covered to the extent possible areas affected by the conflict, where food insecurity and access to education have been a challenge. Since the end of the conflict, WFP has been further expanding its school-feeding programme in the Vanni, also contributing to the rehabilitation of school infrastructures.

Cooking fuel represents a burden for both schools and schoolchildren, who are often required to contribute firewood to their schools to cook WFP's food. To address this issue, WFP signed in May a Memorandum of Agreement with UNOPS Sri Lanka for the implementation of a project for fuel-efficient stoves in schools. According to the agreement, UNOPS is responsible for the design of the stoves, to conduct training sessions on the construction process with the beneficiaries in the locations identified by the Ministry of Education (WFP's school meals implementing

[67] Meeting with the Assistant Director of the Industrial Development Board of Ceylon, 04.06.2010.
[68] Two-pager on *anagi* stove, provided by WFP CO Colombo.

partner), and to hand over designs sketches and the how-to construct of fuel-efficient stoves.[69]

The plan is to build 1,000 stoves in 6 months in 630 WFP-assisted schools throughout the North and the East. UNOPS was selected because of its technical expertise in infrastructure design and development and due to a previous partnership with WFP on the construction of school's kitchens.

A project proposal by UNOPS details the advantages of the stove to be implemented in schools. The Lorena is a two-pot rest stove with a combustion and conversion chambers and a chimney. The conversion chamber is meant to reduce the amount of firewood required for the same amount of heating, while the chimney mechanism should help reducing the smoke, thus mitigating the risk of respiratory infections and eyes sore. Moreover, the Lorena can be constructed using locally available material such as soil, clay and water, at relatively low costs.

At the time the mission took place, the project was yet to be started.

5.3 Environmental protection and regeneration

In the framework of its climate adaptation and disaster mitigation strategies, WFP has been supporting the Sri Lankan Forest Department (Ministry of Environment) to protect and regenerate the national forest resources. Efforts so far included the restoration of forest cover through both long-term and short-term tree planting activities, and water conservation systems.

Long-term interventions consist in timber regeneration, planting of fruit trees such as mango, lime, and cashews, and rehabilitation of the costal and lagoon eco-system through plantation of mangrove, neem and teak trees. In the short term, activities focus on the plantation of fast growing species such as acacias and eucalyptus intended for firewood harvesting. Furthermore, people are trained on sustainable natural resources management and use.[70]

While initially targeted only to resettlement areas in the East, the project has now been expanded to Vavuniya district. Activities are carried out under the FFW scheme, with the Ministry providing material such as seedling, tools, and technical expertise, and WFP contributing food to working participants.[71] Food is provided for one day of planting, and an additional one-day after three months, conditional upon the plant survival rate. This is meant to encourage ownership and care of the plants.

The Forest Department operates through a wide network of technical officers at district, division and community levels. Technical officers are directly responsible for implementation and monitoring of the project. Community engagement and ownership is ensured through systematic consultations on the type of intervention to be prioritized, on identification of targeted participants and beneficiaries, and so on.

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[69] WFP (2010), *Memorandum of Agreement Between WFP and UNOPS*, Colombo.

[70] This includes training on for example how to choose the species to cut; how to prepare firewood for the rainy season; and how to cut branches not to affect the tree. Meeting with the Conservator General of Forests, Forest Department, Ministry of Environment, Colombo, 02.06.2010.

[71] Food is provided for one day of planting and an additional one-day after three months on the basis of the plant survival rate.

6 Conclusions and ways forward: options for an integrated approach to safe access to firewood and alternative energy in Sri Lanka

6.1 Why WFP?

WFP's comparative advantages in promoting a coordinated, multi-sectoral fuel strategy in Sri Lanka include its mandate, the scale and reach of its operations, and a well-established outreach capacity through a long-standing partnership with the Government. WFP's commitment to the work of the SAFE Task Force stemmed from the recognition of the complexity and multi-faceted implications of access to fuel in emergency contexts. This is in the Strategic Plan, which calls for WFP operations to be carried out in ways that contribute to the safety and dignity of beneficiaries, including protection from gender-based and other forms of violence.

Moreover, WFP's Gender Policy sets forth a framework for the organization's work on addressing gender-related protection challenges, including those arising from firewood collection. More specifically, it commits WFP to mobilize resources to provide safe access to fuel, including the provision of fuel-efficient stoves, to the most vulnerable women.[72]

Its nature as a food assistance agency provides a window of opportunity for increased investment in a wide array of activities from vulnerable group feeding to climate change adaptation and disaster mitigation, to livelihoods restoration through for example creation of water conservation systems, tree planting and support to fishing and agriculture.

To date, WFP is the only organization that purposely tackled the issue of cooking fuel in the conflict-affected Northern region. While initially targeted only to IDPs in camps, *anagi* stoves have now the potential to become a concrete risk reduction tool in resettlement areas. Un-cleared landmines and UXOs severely disrupt returnees' lives and livelihoods. They prevent access to reconstruct homes, roads, schools and other essential services and goods, such as firewood for domestic cooking. Resumption of key livelihood activities such as fishing and paddy cultivation is also hampered by the presence of landmines and UXOs, thus negatively affecting people's food security.

Through implementation of energy-efficient stoves at both households and schools levels, WFP actively contributes to reducing people's exposure to the risk of injury from landmines and UXOs explosion.

6.2 Proposed approach

To address the above-mentioned issues, WFP will promote a comprehensive approach for ensuring safe access to cooking fuel among the conflict-affected populations of the North of Sri Lanka.[73] The focus will be on physical protection, and regeneration and management of the natural resource base, thus contributing to climate change adaptation and natural disaster mitigation.

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[72] WFP (2009), *Promoting Gender Equality and the Empowerment of Women in Addressing Food and Nutrition Challenges*, Rome: WFP, p. 10. WFP/EB.1/2009/5-A

[73] The focus will be on the newly accessible districts in the North, while priority will be given to resettlement areas with high level of landmine and UXOs contamination.

Building on already existing initiatives undertaken by the country office, the approach seeks to fully integrate households' and schools' energy needs in the assistance to returnees, and more specifically to: 1) enhance the protection of returnees in heavily mined and UXOs contaminated resettlement sites by reducing cooking fuel needs through the use of energy-efficient stoves; 2) protect the environment by mitigating the consumption of firewood for domestic cooking and supporting tree planting, and awareness raising on sustainable natural resources management and use;[74] 3) to ease the burden on women and families by introducing energy-efficient stoves in WFP-assisted schools; and 4) contribute to the reintegration and rehabilitation of conflict-affected individuals such as disables, injured and females head of household, through engagement in livelihood activities, i.e. *anagi* stove production.

WFP support is meant to be in combination with and to complement existing efforts by other stakeholders such as for example mine risk education and reduction programmes by UNICEF and humanitarian mine action groups; and climate change adaptation and disaster mitigation initiatives by the Sri Lankan Ministry of Environment. Meanwhile, WFP distribution network and capacity will serve as an entry point for the expansion of MRE programmes throughout the North.[75]

Additionally, WFP in collaboration with UNICEF and the Sri Lankan Industrial Development Board (IDB) plans to promote the establishment of *anagi* production centres in targeted locations throughout the North. This will include capacity building on pottery-making of selected beneficiaries, with a particular focus on female heads of households, war-injured and disabled[76]; and provision of the necessary equipments such as pottery wheels and kilns. One way to do this would be to engage to the extent possible IDB (and the Sri Lankan NGO IDEA) in capacity building, including the technicality of *anagi* stove-making, and in the provision of the machineries.[77] In the initial stage, WFP will use its purchasing power to support the commercialization of the stove in remote areas, thus contributing towards fully-fledged, self-sustaining production and marketing capacities by the end of 2011.

Targeted beneficiaries will be also sensitized on energy-saving practices, including food preparation and cooking techniques; and sustainable use of natural resources.

Finally, WFP will continue engaging experts and the private sector in Sri Lanka in further exploring and piloting new technologies such as for example the rice maker, stove and biogas technologies developed by the National Engineering Research & Development Centre (NERD), as well as exploring the potential for wider

[74] At the time of the mission FFW activities for tree planting have already been agreed upon with the Forest Department and budgeted for by WFP Sri Lanka. However, there is scope for WFP to expand these activities to additional areas in the North in 2011, pending mines clearance.

[75] The idea is to take the opportunity provided by WFP food-supported activities to further raise awareness on mine risk prevention and reduction. Examples include FFW/FFT, relief food distribution channelled through the Multi-Purpose Cooperative Societies (MPCS) outlets, school meals, and

[76] Mine action activities include: 1. Mine risk education; 2. Humanitarian demining; 3. Victim assistance, including rehabilitation and reintegration; 4. Stockpile destruction; and 5. Advocacy. This activity will, to the extent possible, contribute to the rehabilitation and reintegration of victims.

[77] IDEA and ITDG (Practical Action) developed a specific training manual called "How to make Sri Lanka's Anagi Stove". The manual provides detailed illustrations and description for all the steps of the construction process and gives a list of tools, moulds and templates required. IDB on the other side has a long experience of capacity building on pottery-making and of the set-up of common services centre, including the provision of machineries.

distribution and use of LPG for domestic cooking, to help communities meet their fuel needs while mitigating the impact on the environment.

Annex 1: Mission itinerary

Day	Date	Tentative programme
1	17 May 2010 (Monday)	Arrival to Colombo, Meet WFP Management
2	18 May (Tuesday)	Travel from Colombo to Habarana Preparation for workshop
3	19, 20 and 21 May (Wednesday, Thursday, Friday)	Protection workshop for WFP team
4	22 May (Saturday)	Travel from Habarana to Jaffna Meeting with WFP HoSO and team
5	23 May (Sunday)	Meeting with Gov't officials SAFE: 2 FGDs
6	24 May (Monday)	Counterpart workshop 1 - Jaffna
7	25 May (Tuesday)	Counterpart workshop 2 - Jaffna
8	26 May (Wednesday)	Travel to Kilinochchi FGD
9	27 May (Thursday) Public Holiday	Travel to Kilinochchi Counterpart Workshop 2 Travel to Vavuniya
10	28 May (Friday) Public Holiday	Travel to Mullaitivu FGD Travel back to Vavuniya
11	29 May (Saturday)	Travel to Mullaitivu Counterpart workshop 3 Travel back to Vavuniya
12	30 May (Sunday)	Meetings – Vavuniya
13	31 May (Monday)	Counterpart workshop – 4 Vavuniya Meeting with WFP team/Inter-Agency meeting Travel to Mannar
14	1 June (Tuesday)	Counterpart workshop 5 – Mannar FGD
15	2 June (Wednesday)	Travel to Colombo
16	3 June (Thursday)	Colombo Meeting with WFP Staff; Forest Department; IDP Protection Working Group; and UNOPS
17	4 June (Friday)	Meeting with IDB; UNDP, UNICEF
18	5 June (Saturday)	Departure