



# Joint Inspection of the Biometrics Identification System for Food Distribution in Kenya

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## UNHCR/WFP Joint Inspection of the Biometrics Identification System for Food Distribution in Kenya

#### I. Executive Summary

#### I.a) Introduction

- 1. Since 2013, WFP and UNHCR have been working jointly to further develop UNHCR's biometric identification checking system, in order to support general food distribution in the refugee camps of Dadaab and Kakuma in Kenya<sup>1</sup>.
- 2. WFP's Office of the Inspector General (OIG) and UNHCR's Inspector General Office (IGO) agreed to conduct a joint inspection to ensure the system is operating effectively, efficiently and with adequate controls in place. The inspection mission was conducted in March 2015, in accordance with the Terms of Reference (ToRs) prepared by OIG and IGO and submitted to WFP and UNHCR Kenya on 5 March 2015.
- **3.** Whenever possible, the inspection adhered to the Charter of WFP Office of the Inspector General and UNHCR's Inspection Handbook.

#### I.b) Key observations of the inspection

- **4.** The biometrics identification system for food distribution can been characterized as a good practice to be considered as an effective tool for other country operations in the region. It provides better and more reliable statistics to management and partners. It also addresses donors' requests for further oversight controls, and contributes in building confidence across the matrix of government, management, staff, donors, implementing and operational partners, and refugees, while preserving the confidentiality and data protection of the beneficiaries.
- **5.** The effective collaboration of UNHCR and WFP during the planning, design and implementation phases of the system also exemplifies effective inter-agency cooperation, which contributed to enhanced mutual appreciation of respective outlooks and challenges.
- 6. The implementation of biometrics for food distribution allowed for improved accountability. The system also promoted better control of the food distribution process, and significantly reduced abuse of food assistance, while providing better coverage to the target beneficiaries. The project led to substantial food distribution savings estimated at USD 1.4 million per month, and a return on investment of the project of approximately 1300 percent over five years. Overall, this contributed to a reduction of 21 percent of the population receiving food assistance between September 2013 and May 2014.
- 7. A total of 11 recommendations are proposed in this report to further enhance the efficiency and

 $^{
m 1}$  This effort started as early as 2009 with discussions between WFP and UNHCR.





effectiveness of the biometrics identification system in Kenya. The related key observations arising from the inspection are:

- a. No real-time evaluation of the impact of the changes in food collection procedures on protection indicators and coping strategies of refugee and host communities has been conducted since the implementation of the project.
- b. The system does not automatically alert the litigation desk when duplicate and/or successive fingerprint scans (called 'positive matches') are recorded for a food collector during a given distribution cycle.
- c. The staff at the litigation desk is not required to document in the system the reasons for overriding unsuccessful fingerprint recognition.
- d. The laptops used at the litigation desks are not equipped with the Microsoftrecommended encryption tools for protecting sensitive information and for preventing unauthorized access.
- e. No expert testing of the implemented safeguarding protocol has been performed to ensure the network connection is secure.
- f. The lessons learned and good practices derived from the Biometrics for Food Distribution project in Kenya have not so far been specifically documented<sup>2</sup>.
- g. The procedure for nominating alternate food collectors when a beneficiary cannot collect the food in person is not always well understood by the refugees.
- h. Temporary cards, or 'tokens', are given to recently arrived refugees during crisis periods so they can access food and non-food items. Fingerprinting token-holders is an important control to prevent misappropriation of food assistance. Additionally, UNHCR is considering using the biometrics solution and process developed jointly with WFP for distributing non-food items, such as blankets and kitchen utensils to persons of concern.
- i. The manifests currently used to identify and monitor the ration card numbers included in each daily food distribution are maintained manually and on paper format. The concept of an e-Manifest is being considered to further automate and streamline the food distribution process.
- j. WFP has gathered evidence through pilots, evaluation and market studies that cash and vouchers can improve the effectiveness of food assistance in the camps by giving beneficiaries more choices of what to eat, strengthen local food markets, and improving improve livelihood opportunities for refugees and host communities alike.
- k. The global MoU between UNHCR and WFP has not been revised since 2011, despite significant developments that have occurred since then in the area of biometrics and its use in refugee identification systems and food distribution.

#### I.c) Management response

- **8.** Management accepted all of the recommendations and submitted several comments that have been taken into consideration in this report.
- **9.** UNHCR's Field Information and Coordination Support Section (FICSS) highlighted that UNHCR has designed throughout 2014 a new Biometrics Identity Management System (BIMS) and a Global Distribution Tool (GDT), with support from teams who participated in the implementation of the existing biometrics identification system for food distribution in Kenya. Most of the technical issues identified by the joint inspection mission have already been addressed in the design of BIMS and GDT. In building these two tools, the existing functionalities were expanded according to lessons learnt from the Kenya model. The new functionalities most notably include:
  - The introduction of an e-manifest at Reception to be used on tablets;
  - The possibility to create separate Distribution Plans for various food and non-food items

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<sup>&</sup>lt;sup>2</sup> According to UNHCR's Field Information and Coordination Support Section (FICSS), the main lessons learned have been taken into consideration in the development of the Biometrics Identification Management System (BIMS) and the Global Distribution Tool (GDT).





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which could potentially be combined in a single distribution effort;

- Representation of all litigation actions within the software;
- The possibility of electronically preventing duplicate food collections at verification rather than manually flagging such cases at litigation "positive match" events will electronically prevent collection more than once during a specific distribution cycle; and
- The prevention of fraudulent entry into the system as food collectors move from the verification area to the distribution location food collection cannot occur unless the case is marked electronically as having been verified beforehand.

Additional benefits of BIMS and the GDT are associated with the ability of checking against records held at other sites so that refugees cannot benefit from food collection at more than one location within a country or across borders.

**10.** WFP's Office of the Inspector General (OIG) and UNHCR's Inspector General's Office (IGO) express their appreciation to WFP and UNHCR managers and staff in Kenya for the solid work delivered on the biometrics for food Distribution project, and for the assistance and cooperation accorded during this inspection.

Mengesha Kebede UNHCR Inspector General David Johnson

WFP Inspector General



#### II. Context and Scope

## II.a) Introduction to the biometrics identification system for food distribution project in Kenya

- 11. For decades, Kenya has hosted refugees from neighboring countries, particularly from Somalia and South Sudan. With a strict encampment policy, the Government of Kenya requires that all refugees reside in camps established since 1991 in the Dadaab and Kakuma areas. The Government's Department for Refugee Affairs (DRA) has the overall responsibility for protecting and assisting refugees in the country. The Government of Kenya counts on the support of the United Nations High Commissioner for Refugees (UNHCR), the World Food Programme (WFP), and other UN agencies and non–governmental organizations (NGOs). UNHCR has received the mandate to lead and coordinate the humanitarian assistance to refugees in Kenya, working in close collaboration with DRA. WFP's mandate includes providing food assistance to all refugees and other persons of concern to UNHCR who reside in the camps.
- **12.** While most refugee caseloads in Kenya are protracted<sup>3</sup>, refugee influxes have continued to date, more recently from South Sudan, with 40,000 new arrivals in 2014, after general violence broke out in the country in late 2013. Both the Government of Kenya and UNHCR are in charge of registering refugees as they arrive and have regularly conducted verification exercises, revising refugee figures accordingly.
- **13.** WFP bases its food sourcing, warehousing and distribution<sup>4</sup> on the figures provided by UNHCR. By mid-2014, Kenya was hosting 569,453 refugees and asylum seekers, 356,879 of who were residing in camps in the Dadaab region and 162,482 in camps of Kakuma region. The rest of the refugees were found mostly in the greater Nairobi area.
- **14.** While the verification exercises conducted by UNHCR produced positive results (for example the Population Verification Exercise conducted in 2012/2013 revealed an overall reduction of the population figures), it was challenging for UNHCR to determine the reasons for the fluctuations in refugee figures and to properly identify legitimate refugees and exclude Kenyan nationals.
- 15. In 2011, UNHCR agreed to WFP's request to modify UNHCR's biometrics identification system for the purpose of food distribution once appropriate safeguards to protect refugee data were put in place. UNHCR and WFP signed a global Memorandum of Understanding (MoU) committing WFP and UNHCR to collaborate on developing mechanisms for exchanging personal data of refugees and asylum-seekers for the purpose of food distribution, which would enhance the integrity of the system<sup>5</sup>. In early 2012, the UNHCR and WFP Country Offices in Kenya signed an agreement on the sharing of data of refugees and asylum seekers in Kenya for the purpose of identity checks during food distribution at Dadaab and Kakuma camps. This agreement paved the way for the establishment and implementation in 2013 of a biometrics-based food distribution system that satisfied the needs and addressed the concerns of both agencies.

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<sup>&</sup>lt;sup>3</sup> UNHCR defines a protracted refugee situation as 'one in which refugees find themselves in a long-lasting and intractable state of limbo. Their lives may not be at risk, but their basic rights and essential economic, social and psychological needs remain unfulfilled after years in exile. A refugee in this situation is often unable to break free from enforced reliance on external assistance'

<sup>&</sup>lt;sup>4</sup> Under the UNHCR-WFP Memorandum of Understanding (Article 6.2), the distribution of food items to refugees falls under UNHCR's responsibility. A different modality has been mutually agreed for the operations in Kenya.

<sup>&</sup>lt;sup>5</sup> Paragraph 3.37 of the Memorandum of Understanding between the Office of the United Nations High Commissioner for Refugees and the World Food Programme, January 2011.





**16.** The mid-2014 Joint Assessment Mission (JAM) confirmed that the biometrics identification system for food distribution in refugee camps in Kenya has improved the accuracy of population statistics management. The system showed a reduction of the population receiving food assistance of approximately 21 percent between September 2013 and May 2014 (for more details see Annex B – *Analysis of Food Distribution Savings due to biometrics system*).

#### II.b) Objectives and scope of the joint inspection mission

- **17.** In view of the apparent success of the biometric identification system established in Kenya, WFP and UNHCR's Offices of the Inspector General agreed to undertake a joint inspection of the system based on commonly agreed terms of reference (ToR). The work was performed by dedicated staff from both Offices with the support of a technical consultant with relevant expertise.
- **18.** The objectives of the inspection as detailed in the ToRs set out to determine if:
  - a) The food distribution functionality of the biometrics identification system has been designed and implemented in full compliance with the initial functional specifications and financial plans, and operates as intended;
  - b) The security features of the system are sufficiently sound to provide viable assurance on the access (connectivity), confidentiality, safeguard, accuracy and integrity of the registration database; and adequate internal controls have been adopted to ensure that no utilization of the system contrary to the intended objectives could be made;
  - c) WFP and UNHCR are getting the full value of the investment and the system has effectively contributed to providing clarity and assurance that: (i) only duly beneficiaries (and/or alternate collectors) receive food assistance; (ii) duly-registered beneficiaries, and especially the most vulnerable, are not excluded from receiving food assistance; and (iii) the rights of refugee beneficiaries are protected, thus contributing to building confidence towards donors and the Government of Kenya alike;
  - d) The UN staff members operating the system are fully trained and Standard Operating Procedure (SOP) manuals of the biometric identification system are maintained and include a robust business continuity plan in case of breakdown;
  - e) An appropriate communication strategy has been implemented towards beneficiaries so they can understand their rights and obligations as far as data protection is concerned.

The inspection also looked into any other matter of common interest that would add value to the current registration system.

19. The inspection mission took place from 15 to 25 March 2015, and included visits to Nairobi, Dadaab and Kakuma, featuring meetings with a wide range of stakeholders, especially representatives from the Government of Kenya, UNHCR, WFP, donor governments, NGOs and refugees. Discussions with UNHCR and WFP included staff at the Country Offices, Regional Office (WFP), Regional Support Hub (UNHCR), and sub-offices of Kakuma and Dadaab. Prior to the mission, the joint inspection team reviewed relevant background documentation and received briefings from headquarters-based staff with knowledge of the system and related operations.



#### II.c) Business process description

- **20.** The food distribution process in the refugee camps in Kenya is conducted twice a month. A detailed flowchart of the process is provided in Annex A *Business Process Description*.
- **21.** The basic procedure for food distribution constitutes the following:
  - i. The food collector (a refugee) must wait at the entrance of the distribution point until a security guard calls for the family size corresponding to their household;
  - ii. Once the corresponding family size is summoned, the food collector proceeds to the reception desk where their ration card is scanned and their fingerprints are verified by the reception assistant. The ration card barcode and the fingerprints of the food collector are compared against the data recorded in UNHCR's proGres database, to ensure that only genuine food collectors are given access to food distribution. A genuine food collector is classified as any member of a refugee household (or an alternate) whose profile is recorded in the proGres database and is 15 years of age or older. If the match is positive, the ration card is embossed and the food collector is granted access to the food distribution corridor. The staff at reception desk checks each index finger twice. After four consecutive negative matches the food collector is directed to the litigation desk for further inquiry. The positive or the negative match is recorded in the proGres database.
  - iii. The refugee has to present the ration card to the attendant at the entrance of the food corridor, who in turn checks that the ration card number is indeed recorded in the daily manifest. The manifest is a list of ration card numbers of households authorized to collect food on a specific day. If the ration card number of the food collector is included in the manifest, the card is punched and the person is directed to the food corridor to collect their food. If the ration card is not included in the manifest, the person is directed to the litigation desk for further inquiry.
  - iv. The verified food collector receives their food in the food corridor. The food collected is then weighed at the end of the corridor. Some non-food items (e.g. soap) are also collected at this stage.
  - v. Before exiting the food distribution center, the food collector hands over their ration card to the final controller, who once again reconciles the ration card number against the daily manifest.
  - vi. Food collectors who have been sent to the litigation desk will have their ration cards and fingerprints inspected by the litigation staff, who has access to more detailed information in the proGres database than the reception assistants. This includes the pictures and bio-data of the genuine household members and alternates related to the scanned ration card. If the combination of photographs, bio-data and fingerprints do not yield a positive match, litigation staff will conduct further inquiries to ascertain that the holder of the ration card is indeed a legitimate food collector. If doubt persists on the legitimacy of the food collector, they are then directed to the UNHCR field office for further verification.
- 22. Although the food distribution process is standardized across all refugee camps in Kenya, each camp has the flexibility to adapt it in a manner that better responds to the camp's specific needs. In this framework, Dadaab has introduced the use of tokens as an additional control measure. A token is a stamped and signed paper card given to the food collector at the reception desk upon verifying their genuine identity. Tokens have a different color and are stamped at each distribution cycle and verified at the entrance of the food corridor. Similarly, an exception has been made in Kakuma, where the age baseline for food collectors is 12 years of age or older in view of the specific profile of the refugee population in this camp.



#### III. Results of the inspection

#### III.a) Good practices observed

- 23. UNHCR's established definition of good practice is any action or initiative that is
  - (i) carried out under a special context and operational environment;
  - (ii) implemented in a unique manner; and
  - (iii) has a direct positive impact on persons of concern (food collectors), or an indirect positive impact on them through enhanced managerial methods. The biometrics identification system, as observed by the inspection team, meets this classification of good practice.
- 24. The biometrics identification system is an effective protection tool that, along with other identity management techniques, significantly enhances accountability and provides better and more reliable statistics to management and partners, including the host government. In its current implementation, it also addresses donors' requests for further oversight controls, and provides confidence across the matrix of government, management, staff, donors, implementing and operational partners and refugees. It contributes to minimize fraud and abuse of food assistance while providing better coverage of the intended beneficiaries. All this leads to better management and control of the food distribution process, resulting in substantial savings.
- 25. The individual components of the system contribute to the improvement and efficiency of UNHCR and WFP operations, and have a positive impact on the beneficiaries and other stakeholders. The effective collaboration of UNHCR and WFP during the planning, design and implementation phases of the system contributed to enhanced mutual appreciation of each other's outlooks, concerns and challenges. WFP Kenya acquired a better understanding of UNHCR's refugee protection mandate and related issues; while UNHCR Kenya learned about WFP's food distribution and pipeline challenges.
- 26. In particular, the team observed that the planning process of the project included both technical and social components that brought together experts across various functional areas, clustered in working groups known as joint technical teams. This included information technology (IT) and protection experts, financial managers and procurement staff engaged in sourcing equipment and building materials, as well as human resources staff engaged in recruitment and training. This practice of working in multi-functional teams has, without a doubt, contributed to the success and acceptance of the biometrics system for food distribution. Furthermore, the project budgets developed jointly by WFP and UNHCR were well managed and resulted in cost-cutting of about 40 percent, mainly due to reduced construction costs of project facilities.
- **27.** Other components that contributed to the overall characterization of the system as good practice included:
  - a) The consideration and handling of protection issues whereby UNHCR and WFP signed an agreement to ensure: (i) the protection and confidentiality of refugee data; (ii) the regular update and maintenance of the registration system (proGres) before each distribution cycle; (iii) the access to the UNHCR network (proGres) at the final delivery points (FDP) only by staff with valid authorization; (iv) the development of procedures for registering alternate food collectors (AFC) and (v) the handling of litigation by trained and experienced staff.
  - b) Sound system development, testing and implementation, with factors including: (i) a professional technical design; (ii) automation of verification; (iii) IT trained staff onsite for





trouble shooting; (iv) successful testing of the system for bugs and breakdowns over several food distribution cycles; (v) network connectivity and speed to reduce time wasted and extended waiting periods; (vi) built-in redundancies developed to cater for and minimize breakdowns; and (vii) a monitoring and evaluation system to analyze the impact of the system on several factors including food security, staple food prices in the local markets, coping strategies and dignity of beneficiaries.

- c) An effective communication campaign which: (i) engaged a professional communications agency, FilmAid International; (ii) produced numerous posters in several languages that were widely distributed and displayed in public places and at food distribution sites; (iii) provided public video screenings during food distributions; (iv) produced radio advertisements, interviews and talk shows; and (v) distributed DVDs.
- d) Well-designed food distribution facilities/buildings with: (i) security consideration for staff, equipment, beneficiaries and food stuffs; (ii) crowd flow controlling mechanisms throughout the several stages of food distribution (entry, verification, litigation, food distribution/corridor, weight control/verification and exit); and (iii) ample air circulation enhanced by steel bars and strong mesh wires.
- e) A well-managed and controlled food distribution process with (i) an automated and transparent verification process; (ii) flexibility to adopt new procedures without compromising system integrity (e.g. in Dadaab, ration cards are embossed and reinforced with tokens to minimize fraud and abuse); (iii) ration card numbers and family sizes matched against the manifest; (iv) implementing partners (IP) contracted through a competitive process; (v) supplementary feeding program available for families with newborn children or children younger than two-years of age; (vi) a well-staffed help desk; (vii) a suggestions box for feedback mechanisms (complaints, compliments); and (viii) the presence of the Kenyan police providing a standby force for crowd control and emergencies.
- f) The community engagement and involvement including: (i) the Food Advisory Committees (composed of refugee community leaders acting as liaison with WFP and IP staff); (ii) religious leaders; and (iii) multi-functional teams (livelihood and education; social services, protection, resettlement, etc.) to handle *ad-hoc* situations.

#### III.b) Summary of key observations

**28.** A total of 11 recommendations are proposed in this report, based on observations made by the inspectors. These observations and recommendations are further detailed, per objective, in Section III. c) of this report.





Observations	Recommendations	Owner	Management Response	Due date					
<b>Objective 1:</b> The food distribution functionality of the biometric identification system has been designed and implemented in full compliance with the initial functional specifications and financial plans, and operates as intended.									
The operational plan of the biometrics for food distribution project requested conducting a real-time evaluation of the impact of the changes in food collection procedures on protection indicators on coping strategies of refugee and host communities. No such evaluation has been done since the implementation of the project.	UNHCR should conduct a real-time evaluation on the impact on protection indicators of the new biometrics system for food distribution in Kenya.	UNHCR Kenya	The recommendation is accepted by UNHCR Kenya. The most relevant protection indicators for Dadaab and Kakuma will need to be identified and monitored.	December 2015					
<b>Objective 2:</b> The security features of the system are sound enough to provide sufficient assurance on the access (connectivity), confidentiality, safeguard, accuracy and integrity of the registration database and ensure that adequate internal controls have been adopted to ensure that no utilization of the system contrary to the intended objectives could be made.									
When a food collector scans their fingerprints at the verification counter more than once during the same distribution cycle, the system does not alert the verification staff about this duplication, and the successive scans are perceived as the primary one.	At the verification desk, a warning pop-up message should automatically be displayed to staff whenever a "positive match" event is recorded more than once during a specific distribution cycle. This is to alert the litigation officer that the person of concern has already been controlled during the same distribution cycle, and to prevent any possible fraudulent activity.	UNHCR Kenya	The recommendation is accepted by UNHCR Kenya. Many reasons for duplication of "positive match" may be identified, notably the difficulty to capture clear finger prints. Duplication cannot only be attributed to attempts to commit fraud.	December 2015					

There are other control mechanisms in place to prevent fraud (e.g.: embossment of the ration card, use of tokens, check on the manifest, etc.)



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Whenever the fingerprints of a food collector are not automatically recognized by the system, the person is sent to the litigation desk where further inquiries are conducted to ascertain that the holder of the ration card is indeed a legitimate food collector. If the food collector is legitimate, the litigation staff pushes the *override* button in the system to record the positive match. However, the litigation staff is not required to document in the system the reason for overriding the unsuccessful fingerprint recognition.

At the litigation counter, once the *override* button is selected, the system should automatically require the staff to document the reason for the override, to enable tracking of these overrides and also for the accuracy of statistical reporting.

UNHCR Kenya The recommendation is accepted by UNHCR Kenya. In Dadaab, the system is configured to enable tracking of override reasons for: 1) Health referral; and 2) Certificate or other approved individual.

September 2015

UNHCR staff members working in the litigation counters at the food distribution sites use laptops using Windows 7 as their operating system. These laptops are currently not equipped with recommended encryption tools for protecting sensitive information and for preventing unauthorized access to the machine.

UNHCR is encouraged to install a bit locker encryption mechanism to encrypt the drive and its content to prevent the software being accessed and the data being reverseengineered to siphon sensitive refugee information. The encryption practice would

The recommendation is accepted by UNHCR Kenya. BitLocker is already installed in all UNHCR laptops and activated in some laptops. The laptops where BitLocker is not yet enabled are being identified.

The system for Kakuma will

be modified accordingly,

with additional options for documenting overrides.

September 2015

UNHCR is also invited to implement and enable the Intel® Anti-Theft Technology via a choice of security software vendors (ISVs) or service providers. Hardware-based Intel AT for notebooks provides local, tamperresistant protection that works like a poison pill that disables the computer and access to its data even if the operating system is reimaged, a new hard drive is installed, or the notebook is disconnected from the network. This would be an effective approach

be very important, specifically after the

introduction of the e-Manifest. The sheer

amount of ration numbers linked to specific refugees could be abused in the case of a network attack. Encryption would be important to implement as a current practice

practice

be considered

as

for

of biometrics systems.

the future

and also to

implementation

recommended

The recommendation is accepted by UNHCR Kenya. This measure will prevent misuse of the data in case of laptops being stolen. The technology is readily available in Kenya. It can be implemented as soon as possible providing that resources are available. This recommendation also

September 2015





biometric systems.

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Although the safeguarding protocol implemented seems sufficiently efficient to provide a secure network connection, no expert testing of these safeguards has been performed.

Finally, UNHCR should contract experts to conduct a penetration testing exercise to the network and system, in order to: (i) identify vulnerabilities that may be difficult or impossible to detect with an automated network or application vulnerability scanning software; (ii) assess if the system is actually safe from hackers and other third party intruders; (iii) assess the magnitude of potential business and operational impacts of successful attacks; (iv) test the ability of network defenders to successfully detect and respond to the attacks; (v) prevent losses due to network failure; and (vi) provide evidence to support increased investments in

to consider in both the current setting in Kenya and also for future implementations of applies beyond the biometric tools and could suggest a change in the corporate software tools.

UNHCR Kenya (with the support from UNHCR Headquarters) The recommendation is accepted by UNHCR Kenya. It can be implemented once an expert/consultant has been identified and funds have been released to cover his/her fees. This recommendation could equally apply to all UNHCR systems and not only to the biometrics system

October

**Objective 3:** WFP and UNHCR are getting the full value of the investment and the system has effectively contributed to provide clarity and assurance that (a) only duly beneficiaries (and/or alternate collectors) receive food assistance; (b) duly-registered beneficiaries, and specially the most vulnerable, are not excluded from receiving food assistance; and (c) the rights of refugee beneficiaries are protected; thus contributing to building confidence towards both donors and the Kenyan Government.

The functionality offered by the biometrics for food distribution system complies with objective 3 of the inspection mission.

No recommendations made.

security personnel and technology.

2015





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Objective 4: The UN staff members operating the system are fully trained and Standard Operating Procedure (SOP) manuals of the biometric identification system are maintained and include a robust business continuity plan in case of breakdown.

The lessons learned and good practices derived from the biometrics for food distribution project in Kenya have not been so far specifically documented, Both UNHCR and WFP would benefit from having such documentation, to be used as reference by other country operations

UNHCR and WFP should prepare a 'lessons learned" document detailing good practices implemented during the biometrics project in Kenva and identifying pitfalls to avoid for future similar projects. This document will help other operations in implementing similar projects and might also be used for creating visibility in order to raise funds from donors (''advertise our success stories").

UNHCR and WFP Kenya, With support from regional offices/hub

The recommendation is accepted by UNHCR and WFP Kenya.

December 2015

**Objective 5:** An appropriate communication strategy has been implemented towards beneficiaries so that they can understand their rights and obligations as far as data protection is concerned.

Although the majority of refugees have a good understanding of the biometrics-related procedures and expressed appreciation for the enhanced transparency and fairness brought by the system, the procedure for nominating alternate food collectors (in case a beneficiary cannot collect the food in person) is not always well understood. Radio transmissions and public information, using posters, television monitors and public announcement systems both in the food distribution points and inside the refugee camps have shown to have the most outreach to the beneficiaries.

The information awareness campaign should be re-launched in 2015. Special emphasis should be placed on the procedure for the nomination and selection of alternate food collectors.

Further, the information awareness campaign should include information on how the biometric data is protected so the beneficiaries can understand their rights and obligations as far as data protection considerations are concerned.

WFP Kenva

Tacit acceptance of the recommendation-No specific comment received.

December 2015





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UNHCR Kenva

#### **Objective 6:** Any other matter of common interest that would add value to the current registration system.

UNHCR is considering using the biometrics solution and process developed jointly with WFP for distributing non-food items, such as blankets and kitchen utensils to persons of concern.

During crisis periods, UNHCR issues temporary cards, or 'tokens', to refugees who are not registered, so that they could access food and nonfood items. Fingerprinting token-holders is an important control to ensure that each household receives only one token and to prevent previously registered refugees from posing as new arrivals and getting more assistance than what they are entitled to.

UNHCR and WFP, along with their partners, are constantly analyzing options for enhancing internal controls and further automating and streamlining the biometrics for food distribution system. The concept of an e-Manifest is being considered, to replace the daily paper manifests currently in use during the distribution cycles. The paper manifests contain the list of ration card numbers included in the food distribution of the day. The e-Manifest is a simple and automated tool designed to assist partners working in the food distribution centers with the tracking of food and non-food items distribution.

The biometrics system facilitates the establishment of strong controls for the cash and vouchers programming that WFP is in the process of implementing. WFP has gathered evidence through pilot, evaluation and market studies that cash and vouchers can improve the effectiveness of food assistance in the camps by giving beneficiaries more choice in what they eat, strengthening local food markets and improving livelihood opportunities The joint OIG-IGO inspection team strongly supports the initiative of UNHCR to extend the use of biometrics to non-food distributions and to move away from the use of temporary tokens. UNHCR Kenya is invited to further analyze the opportunity of using the biometrics system and the process developed jointly with WFP in the framework of non-food distributions, while ensuring that food and non-food assistance is targeted at the household level to reach the genuine beneficiaries and especially the most vulnerable populations.

UNHCR and WFP, along with their partners in the field, should further analyze the possibility of implementing the concept of an without e-Manifest jeopardizing confidentiality and integrity of the data in proGres.

In line with the global 2014 UNHCR and WFP Joint Assessment Mission (JAM) and Joint Plan of Action on cash and vouchers, the ioint OIG-IGO inspection team recommends a coordinated analysis and/or implementation of cash and voucher-based interventions in refugee operations in Kenya. The IGO recommends UNHCR to conduct a feasibility analysis of the use of e-vouchers in the

The recommendation is accepted by UNHCR Kenya. The cash and vouchers systems will be introduced during the 2<sup>nd</sup> half of 2015. Distribution of NFIs is already happening in Kakuma through biometrics. The biometrics system is also used for other protection and assistance interventions.

UNHCR The recommendation is and WFP Kenva

Timeframe accepted by UNHCR Kenya. to be The use of the e-manifest is decided already being discussed. The upon expected cost to implement between the e-manifest is about UNHCR 20,000 USD. and WFP Kenya.

UNHCR Kenya The recommendation is accepted by UNHCR Kenva. A feasibility study on the use of the voucher is underway involving Headquarters, Dadaab and Kakuma, A consultant is being identified.

December 2015

December

2015



for refugees and host communities alike.

The latest global MoU signed in 2011 between UNHCR and WFP commits the two agencies to collaborate on developing mechanisms for exchanging personal data of refugees and asylumseekers for the purpose of food distribution, which will enhance the integrity of the system. Since then, significant developments have taken place in the area of biometrics and its use in refugee identification systems, including for the purposes of food distribution.



framework of non-food assistance during emergency interventions.

The 2011 global MoU between UNHCR and WFP should be revised (or supplemented) to reflect the results of the Kenya biometrics identification system for food distribution purposes, as well as UNHCR's adoption and introduction of BIMS.

UNHCR and WFP Headquarters WFP considers that a global data-sharing agreement between the two agencies would also be important to support biometrics, as well as the cash and vouchers programming.

UNHCR believes that the revised MOU should include a joint corporate commitment to fundraise and implement the next generation of this biometrics system in UNHCR-led refugee operations with food and non-food components.



#### III.c) Observations per objective

**29.** The following section details the observations and recommendations made for each of the objectives of the Inspection mission.

Objective 1: The food distribution functionality of the biometric identification system has been designed and implemented in full compliance with the initial functional specifications and financial plans, and operates as intended.

#### **Observations:**

- **30.** WFP and UNHCR signed a global Memorandum of Understanding (MoU) in January 2011 to reaffirm the objectives and scope of collaboration between the two agencies as well as the division of responsibilities in refugee situations. The MoU commits both agencies to collaborate on developing mechanisms for exchanging personal data of refugees and asylum seekers for the purpose of food distribution and for accurately identifying them for the mobilization and efficient use of resources.
- **31.** On 24 February 2012, and under the umbrella of the MoU, both agencies signed a temporary country-level agreement on access to personal data of refugees and asylum seekers in Kenya, for the purpose of identity checks during food distribution at Dadaab and Kakuma refugee camps. By signing this agreement, WFP and UNHCR acknowledged the need for a better system for identifying legitimate food beneficiaries in the camps, while remaining sensitive to vulnerable households that are legitimately unable to collect food by themselves.
- 32. The project for building a new biometrics system for food distribution was initiated in late 2012 based on functional specifications defined by WFP and UNHCR in the *Operational Plan for Implementation of New Food Collection Procedures in Dadaab and Kakuma using Biometrics* of 8 November 2012. The technical specifications of the project are described in the document *New food distribution procedure in Kenya Technical Design* issued on 9 January 2013. The financial plan for the project was presented in the WFP-UNHCR Kenya Biometrics Project Budget document (12 June 2012) and included a total cost for the project of USD 8.5 million as summarized in Table 1 below. The project was implemented cost-effectively, in compliance with the financial plans, and resulted in savings of a USD 3.4 million.

Table 1: Biometrics Project - Budget and Actual Expenditure (2012-2014) - in USD

Item	Planned Budget				Total Actual Expenditure	Actual as % of Budget
-	2012-2014	2012	2013	2014	2012-2014	-
Total (in USD)	Total (in USD) 8,496,601		3,458,294	1,560,610	5,142,875	61%

- **33.** Amendments to the initial specifications were adopted during the course of the project, adding further functionality to the system (e.g. the ability to nominate alternate food collectors in the system) and better responding to the objectives of the project.
- **34.** The inspection reviewed compliance towards these specifications and concluded that the food distribution functionality of the biometrics identification system implemented in Kenya has been





designed and implemented in full compliance with the desired functional specifications in terms of process, assets and construction, information technology (IT), staffing and communication strategy.

- **35.** The *Operational Plan*<sup>6</sup> of the project requested monitoring the following variables before and after the start of the project:
  - Household monitoring of food consumption scores, coping strategies index and household expenditure in Kakuma and Dadaab refugee camps as well as the respective host communities:
  - Market price monitoring of staple commodities in selected markets;
  - Performance of admission and litigation desks, including daily rates and number of households accepted and rejected; and
  - Protection indicators on coping strategies of refugee and host communities due to changes in food collection procedures.

The first three sets of variables have been closely monitored during the course of the project, but not the protection indicators. No real-time evaluation on the impact on protection indicators of the new biometrics system for food distribution has been conducted. WFP, UNHCR and implementing partners' representatives in Kenya interviewed during the inspection mission highlighted the need to conduct such evaluation.

- **36.** The 2014 WFP and UNHCR Joint Assessment Mission (JAM) for the Kenya refugee operation, undertaken in June and July 2014, assessed the food security and nutrition situation in both camps jointly with some donors, the Government of Kenya, non-governmental organizations (NGO) and the refugees. The key findings of this participatory process feed into the elaboration of the subsequent Joint Plan of Action (JPA). The JAM recommended enhancing the monitoring of efficiency and effectiveness of the biometrics system in food distribution, especially with regard to network systems and issues with alternate collectors.
- **37.** The project was implemented under budget with cost-savings of USD 3.4 million and overall compliance with the financial plans. Other than IT, which included communications infrastructure and computer equipment, all other major budget items (staff, construction and others) were implemented within their budgetary allocations.
- **38.** On 8 April 2013, WFP signed a Letter of Agreement (LoA) with the United Nations Office for Project Services (UNOPS) on the provision of human resources support to the biometrics project for food distribution in Kenya, which included the administration of 90 staff contracts. This temporary agreement met the needs of the project during its start-up phase. Pursuant to the project taking effect on 30 September 2014, these positions were regularized and brought under the administration of WFP, while the litigation and IT staff have come under the direct supervision of UNHCR. As defined in the Post October 2014 Biometrics Project Staffing Plan, WFP will continue to cover the costs of these positions until January 2016, when the financial and contractual responsibility for these positions will be transferred to UNHCR. Estimates received from UNHCR indicate that the Agency will have to absorb between 75 and 82 full-time staff as of January 2016.<sup>7</sup>
- **39.** Currently, staff working under the framework of the biometrics for food distribution project has varying benefits, depending whether they are contracted by UNHCR, WFP or UNOPS. Differences in benefits may result in tension among staff members, an issue that will be resolved once

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<sup>&</sup>lt;sup>6</sup> Operational Plan for implementation of new food collection procedures in Dadaab and Kakuma using Biometrics, Monitoring and Evaluation section (WFP - May 2013).

<sup>&</sup>lt;sup>7</sup> According to WFP, the estimated number of persons UNHCR would need to absorb is equal to 21 (only the litigation and IT staff).





UNHCR absorbs all staff (unless UNHCR decides that some of the positions will be managed by UNOPS through individual contractor agreements).

#### **Underlying causes of observations:**

**40.** Due to financial constraints, UNHCR has not given priority to conducting a real-time evaluation of the protection indicators on coping strategies of refugee and host communities due to the implementation of the biometrics for food distribution system.

#### **Implications:**

**41.** Without a comprehensive evaluation of the impact of the biometrics project on the protection indicators on coping strategies of refugee and host communities, UNHCR is unable to ensure that all legitimate food beneficiaries, and especially the vulnerable persons, have access to food distribution. Without such an evaluation in place, UNHCR faces difficulties in certifying that the fundamental protection rights of persons of concern have been properly preserved by the use of biometrics in food distribution.

#### **Recommendation:**

1.1. UNHCR should conduct a real-time evaluation on the impact on protection indicators of the new biometrics system for food distribution in Kenya.

#### **Management Comments:**

**42. UNHCR Kenya:** The recommendation is accepted. The most relevant protection indicators for Dadaab and Kakuma will need to be identified and monitored.

**WFP Kenya:** While not yet published, UNHCR did look into the possible effects of biometrics based on the variations of the indicators in the agency's yearly results framework. No negative trend is apparent. WFP likewise looked at food consumption, coping strategies and retail food prices before and after biometrics. The information was published in the monthly donor updates on biometrics.

Target implementation date: December 2015



Objective 2: The security features of the system are sound enough to provide sufficient assurance on the access (connectivity). confidentiality, safeguard, accuracy and integrity of the registration database and ensure that adequate internal controls have been adopted to ensure that no utilization of the system contrary to the intended objectives could be made.

#### **Observations:**

#### 43. Connectivity:

Security features of the system provide sufficient assurance on the access and connectivity. The inspection team visited the food distribution sites at the refugee camps in Kakuma and Dadaab and reviewed the security features of the biometrics system. On the verification counters which are managed by WFP, all IT equipment were maintained and stored in a safe and locked storage area at the WFP sub office. The IT equipment includes:

Server: A proGres/fingerprint terminal server at each food distribution center,

consisting of a Lenovo T440s laptop loaded with the databases required to

verify fingerprints, photos and other data for each refugee.

A number of Lenovo T440s laptops connected to the local server at each Laptops:

food distribution center to scan ration card barcodes, beneficiary

fingerprints and other data.

Metrologic/Honeywell MS9520 Voyager barcode readers used to scan ration Barcode reader:

card barcodes.

Fingerprint scanner: Crossmatch Verifier 300 LC fingerprint scanners used to verify the

beneficiary fingerprints against the database.

The food distribution sites and the database server at offices are being connected using the Dual-ring Network Topology.

Dual-ring network topology consists of two rings connected to a network. Each ring works independently until one is disabled during a network failure. When this takes place, the functioning ring automatically wraps around the disabled ring to ensure data flow. Dual-ring topology is used to ensure speed, reliability and uninterrupted long distance communication. It ensures reliable service availability for high-end applications, and in the case of network failure from the primary food distribution site to the office, the technology will switch the network traffic to the secondary food distribution site then relay back to the office, resulting in minimum delay in server communication.

This system is powered by a generator. When a power shortage occurs, the system automatically switches to the solar power to maintain the process online.

#### 44. Confidentiality:

UNHCR currently provides a minimum set of information to enable WFP to undertake food distribution. UNHCR has implemented stringent anti-fraud measures in its registration process, and the information provided by UNHCR is therefore considered to be accurate and valid. At the





food distribution sites, once the food collectors present themselves to the verification counters, their ration cards are scanned. When it is confirmed that the correct family size is being served, their fingerprint is then scanned. At the food distribution sites, the refugee database is used at both the verification counters and the litigation counters.

Verification counters are operated by WFP staff. Once the food collector's fingerprint is scanned at the verification counter, a positive or negative response is given to the verification. Verification staff only has access to whether the match is positive or negative, with no additional data about the beneficiary, or extended access to the UNHCR database.

Once the fingerprint is scanned, it is compared against the list of fingerprints linked to the family of the individual presenting the ration card. For example, if the food collector is from a family of ten members, once the fingerprint is scanned the system will compare the fingerprint to all fingerprints linked to this specific family to determine whether it is a match or not. If it is a match, the ration card is embossed and the food collector is permitted through to the food collection corridor. Any issues with the fingerprint or the ration card require the food collector to proceed to the litigation counter.

It was noted that even if a person scans their fingerprint more than once at the verification counter during the same distribution cycle, the system does not alert the verification staff about this duplication and the successive scans are perceived as the primary one.

The litigation counters at the food distribution sites are operated by UNHCR staff using UNHCR equipment. When the beneficiaries arrive at the litigation counter, their fingerprints are scanned to bring up their information and determine whether their food collection requests at that time are valid.

The information generated by the software depends on user profiles. All user profiles are logged and kept at the IT security department of UNHCR to keep track of all administrator users. The information available to the litigation staff is only accessible once connected to the server while at the food distribution site. No information is stored or kept on the laptop computer used by the litigation staff. All the communication between the litigation counter and the server at UNHCR is transferred in binary format, ensuring that the data has no readable content without the software that is used to interpret or use it.

#### 45. Safeguards:

Four Levels of security were built to ensure the safeguarding and security of the network and the data transferred between the food distribution sites and the UNHCR database server at the relevant office. Listed below are the levels of security currently in place:

#### 1. AES 128 Encryption:

The Advanced Encryption Standard, or AES, is a symmetric block cipher used by the U.S. Government to protect classified information. It is implemented in software and hardware across the world to encrypt sensitive data. AES comprises three block ciphers, AES-128, AES-192 and AES-256. Each cipher encrypts and decrypts data in blocks of 128 bits using cryptographic keys of 128-, 192- and 256-bits, respectively.

#### 2. Hidden SSID:

An SSID is the name of a wireless local area network (WLAN). All wireless devices on a WLAN must employ the same SSID in order to communicate with each other. SSID is a case sensitive, 32 alphanumeric character unique identifier attached to the header of packets sent over a WLAN that acts as a password when a mobile device tries to connect to the basic service set (BSS) - a component of the IEEE 802.11 WLAN architecture.





- Proprietary Air Interface:
  - Only equipment manufactured by Radium would be recognized and allowed to gain authorization to connect to the network after passing the relevant checks.
- 4. MAC address lock:

Just like a wired NIC, a wireless NIC also has a MAC address, which is a unique identification for every single NIC manufactured. MAC addresses are used as a security measure for wireless network.

Although the safeguarding protocol implemented seems efficient to provide a secure network connection, no expert testing of these safeguards has been performed.

#### 46. Accuracy and integrity of the registration database:

At the food distribution sites, the communication between the litigation counters with the database server at UNHCR field office is recorded. As such, the database is updated to ensure all complaints and/or requests from food collectors, such as missing ration cards, missing names or ration cards in the food manifest, family reunification, and litigation, among others, are reviewed.

It was observed that whenever the litigation staff pushes the override button after determining a match, they do not record the reason for the override, regardless of whether it was a fingerprint issue, alternative food collector, wrong family size or any different reason in order to be traced back.

A full backup of the database is performed daily at each of the respective offices in Nairobi, Kakuma and Dadaab. These backups are also exchanged among the three offices every two weeks in order to ensure the accuracy of the database and a full trail of the backup sequence.

All backups are saved on two media at different locations: a built-in hard disk drive and an external disk/backup tape kept outside the server room in a secured and locked storage to ensure the safety and integrity of these backups.

#### Underlying causes of observations:

- **47.** When a fingerprint yields a positive match, it is recorded in the system. However the system does not automatically alert the verification staff when duplicate scans occur during a given distribution cycle. This was a conscious decision from UNHCR and WFP management in order not to restrict freedom of refugees as a matter of principle.
- **48.** The system has not been configured to automatically request the litigation desk to indicate the reason for pushing the override button.
- **49.** UNHCR did not consider it necessary to install encryption tools in the laptops used by the litigation teams and to conduct network penetration tests; to ensure laptops and network connectivity are protected against any sort of unauthorized intrusion.

#### **Implications:**

**50.** That positive match can be triggered more than once during a distribution cycle, potentially leading to fraudulent activity. A warning pop-up message that would be automatically displayed to staff whenever a 'positive match' event is recorded more than once during a specific distribution cycle is not perceived by the Inspectors as a restriction to refugees freedom and right to collect food.



- **51.** That litigation staff can push the override button without documenting the reason for the override, limiting the ability to track the reasons for overriding the information in the system.
- **52.** Network intrusion or remote hacking of UNHCR's system could compromise sensitive information stored in the database. This sensitive information could be accessed remotely by unauthorized persons, endangering UNHCR's mandate to protect the confidentiality of refugee data.

#### **Recommendations:**

- 2.1. At the verification desk, a warning pop-up message should automatically be displayed to staff whenever a 'positive match' event is recorded more than once during a specific distribution cycle. This is to alert the litigation officer that the person of concern has already been controlled during the same distribution cycle and to prevent any possible fraudulent activity.
- 2.2. At the litigation counter, once the override button is pushed, the system should automatically require the staff to document the reason for the override, to enable tracking of these overrides and also for the accuracy of reported statistics.
- 2.3. Litigation counters at the food distribution sites are managed by UNHCR using laptops using Windows 7 as their operating system. UNHCR is encouraged to install a BitLocker encryption mechanism<sup>8</sup> to encrypt the drive and its content to prevent the software being accessed and the data being reverse-engineered to siphon sensitive refugee information. The encryption practice would be very important, specifically after the introduction of the e-Manifest. The sheer amount of ration numbers linked to specific refugee could be abused in the case of a network attack. Encryption would be important to implement as a current practice and also to be considered as the recommended practice for future implementation of biometrics systems.

UNHCR is also invited to implement and enable the Intel® Anti-Theft Technology via a choice of security software vendors (ISVs) or service providers. Hardware-based Intel AT for notebooks provides local, tamper-resistant protection that works like a poison pill that disables the computer and access to its data even if the operating system is reimaged, a new hard drive is installed, or the notebook is disconnected from the network. This would be an effective approach to consider in both the current setting in Kenya and also for future implementations of biometrics systems.

- 2.4. Finally, UNHCR should contract experts to conduct a penetration testing exercise to the network and system, in order to:
  - Identify vulnerabilities that may be difficult or impossible to detect with an automated network or application vulnerability scanning software.
  - Assess if the system is actually safe from hackers and other third party intruders.
  - Assess the magnitude of potential business and operational impacts of successful attacks.
  - Test the ability of network defenders to successfully detect and respond to the attacks.
  - Prevent losses due to network failure.
  - Provide evidence to support increased investments in security personnel and technology.

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<sup>&</sup>lt;sup>8</sup> *BitLocker* is a full disk encryption feature included with the Ultimate and Enterprise editions of Windows Vista and Windows 7, the Pro and Enterprise editions of Windows 8 and Windows 8.1,<sup>[4]</sup> and Windows Server 2008 and later. It is designed to protect data by providing encryption for entire volumes.





#### **Management Comments:**

- **53. UNHCR Kenya:** The recommendations are accepted by UNHCR Kenya.
  - Recommendation 2.1.: Many reasons for duplication of "positive match" may be identified, notably the difficulty to capture clear finger prints. Duplication cannot only be attributed to attempts to commit fraud. There are other control mechanisms in place to prevent fraud (e.g.: embossment of the ration card, use of tokens, check on the manifest, etc.).
  - Recommendation 2.2.: In Dadaab, the system is configured to enable tracking of override reasons for: 1) Health referral; and 2) Certificate or other approved individual. The system for Kakuma will be modified accordingly, with additional options for documenting overrides.
  - Recommendation 2.3.: BitLocker is already installed in all UNHCR laptops and activated in some laptops. The laptops where BitLocker is not yet enabled are being identified. The use of Intel® Anti-Theft Technology will prevent misuse of the data in case of laptops being stolen. The technology is readily available in Kenya. It can be implemented as soon as possible providing that resources are available. This recommendation also applies beyond the biometric tools and could suggest a change in the corporate software tools.
  - Recommendation 2.4.: It can be implemented once an expert/consultant has been identified and funds have been released to cover his/her fees. This recommendation could equally apply to all UNHCR systems and not only to the biometrics system.

**Target implementation date:** September 2015 (2.2. and 2.3.), October 2015 (2.4.) and December 2015 (2.1.)





**Objective 3:** WFP and UNHCR are getting the full value of the investment and the system has effectively contributed to provide clarity and assurance that: (a) only duly beneficiaries (and/or alternate collectors) receive food assistance; (b) dulyregistered beneficiaries, and specially the most vulnerable, are not excluded from receiving food assistance; and (c) the rights of refugee beneficiaries are protected; thus contributing to build confidence towards both donors and the Kenyan Government.

#### **Observations:**

#### WFP and UNHCR are getting the full value of the investment:

- 54. The initial budget for the biometrics project amounted to USD 8.5 million. The project was planned to start in June 2012 and be completed by September 2014, including three months of system testing, followed by a year (October 2013-September 2014) of live implementation. The system was completed on time and mainstreamed in October 2014. The development, testing and implementation of the system cost USD 5.143 million (61 percent of the original budget), realizing cost savings of USD 3.35 million, mainly due to adapting and modifying existing buildings into reception halls as opposed to erecting new structures. Prefabricated materials were used instead of bricks and mortar as had been planned, and are considered as sufficiently durable for future architectural designs of food distribution facilities.
- **55.** WFP and UNHCR are getting added-value for the investment. For evidence of the value for the investment, statistics indicated that within six months of the implementation of the biometrics system, the population collecting food declined by over 20 percent, mainly due to the system's design capability to cross-reference food collectors' fingerprints against UNHCR's refugee registration database (proGres). The biometrics system effectively ensures better targeting of beneficiaries so that food is only distributed to the intended beneficiaries, thereby reducing fraud, abuse and food diversion. As a result, during the first eight months of the biometrics system, the amount of food required for the registered refugee population was reduced by over 11,000 metric tons. This resulted in savings of more than USD 11.1 million (USD 1.4 million per month). For details see Annex B - Analysis of food distribution savings due to biometrics system).
- 56. As an investment, the biometrics system has led to considerable savings in food distribution costs, in addition to boosting confidence among donors and management, as the integrity of data provided by UNHCR was greatly enhanced. In particular, the system led to WFP savings in food distribution of over USD 5.72 million by the end of February 2014, merely five months after it became operational. This was well over the USD 5.14 million invested in the system. In addition, there were efficiency gains in the registration process due to the systems capability to cross-reference food collectors' fingerprints against UNHCRs proGres database.
- 57. Assuming that the actual population assisted in the camps and the commodity prices remain stable during the next five to seven years, the return of investments (ROI) of the project reach 1297% (five years) and 1896% (seven years), clearly indicating the extremely high degree of profitability (investment worthiness) of the project. The details of the ROI calculation are provided in Annex C - Calculations of the Return of Investment.





**58.** Furthermore, with the investment in the biometrics system, WFP and UNHCR were able to achieve greater accountability and more controls for the food distribution. In addition, they achieved more effective data sharing and collaboration. As a result, biometrics has opened up opportunities of support for more beneficiaries and to improve effectiveness of refugee assistance due to the efficiency gains derived from the system.

### Only duly-registered beneficiaries (and/or alternate collectors) receive food assistance:

- **59.** The biometrics system for food distribution has proven to be successful not only at reducing operating costs and food volumes, but also at improving the targeting to the legitimate beneficiaries, and especially the most vulnerable.
- **60.** The biometrics project implemented in Dadaab and Kakuma led to a substantial decrease in estimated refugee populations. Since its implementation on 1 October 2013, the number of people receiving food assistance has dropped significantly, attributed largely to a reduction in the number of ration cards being used fraudulently. The cost reductions for WFP resulting from the implementation of the biometrics for food distribution in Kenya are above USD 1.5 million per month.
- **61.** According to a survey conducted by WFP in November 2014, 77 percent of refugees polled were satisfied with how the new controls had been implemented, and 60 percent responded that the new procedures made food distribution faster and more orderly.
- **62.** Based on interviews conducted with WFP, UNHCR, partners and refugee representatives during the inspection mission to Kenya, inspectors received confirmation that the biometrics system has significantly enhanced the controls in place for food distribution, resulting in a drastic decrease of misappropriation of food assistance.

### Duly-registered beneficiaries, and especially the most vulnerable, are not excluded from receiving food assistance:

- **63.** During the field visits to Kakuma and Dadaab camps, the inspection team received confirmation that the biometrics system has greatly enhanced the protection of the refugees' right to collect food. Inspectors consulted WFP, UNHCR, partners and refugee representatives, and did not receive any allegations of recent cases where vulnerable beneficiaries would have been excluded from receiving food assistance as a result of the implementation of the biometrics system for food distribution.
- **64.** The system offers a robust mechanism for vulnerable beneficiaries to nominate short or long-term alternates. The principle of alternates is acknowledged to be an adequate method to avoid exclusion from receiving food assistance.
- **65.** Inspectors noted, however, that the biometrics for food distribution system may have had a significant impact on host communities (non-refugee populations). WFP observed a considerable decrease in the amount of food aid for sale in the local markets after the implementation of the biometrics project, which may result in a deterioration of the food security situation of local populations, and rising tension between local communities and refugees<sup>9</sup>. According to WFP, this reduction in supply did not however result in a discernible increase in food prices in the

<sup>&</sup>lt;sup>9</sup> As opposed to what local authorities mentioned, WFP's monitoring figures seem to indicate that the amount of food aid for sale was reduced in the camp markets but no impact was observed in surrounding markets in terms of either supply or prices.



markets.

#### The rights of refugee beneficiaries are protected:

66. At the beginning of the project refugees expressed concerns about exposure of their identity between UNHCR and WFP. These concerns have been addressed by developing a user interface linking the biometrics for food distribution in Kenya and the UNHCR proGres database that does not require access to any confidential refugee data by WFP staff members or partners. As stated in Objective 4 of this report (cf. infra), the system also offers sufficient controls to ensure confidentiality and integrity of refugee data in proGres. No biometrics data is exchanged or shared with WFP during this process.

#### Contributing to build confidence towards both donors and the Kenyan Government:

- **67.** The biometrics project provides a good example of effective coordination and collaboration between UNHCR and WFP. The project design and implementation was guided by a crossfunctional joint Technical Working Group (TWG) made up of WFP and UNHCR staff from Nairobi, Dadaab and Kakuma. The design of the project was preceded by extensive consultations with stakeholders, including donors and the Kenyan Government.
- **68.** Inspectors met with representatives of the Kenyan Government and key donor governments (DFID, ECHO and USAID) in Nairobi. All parties confirmed their satisfaction with the project, and highlighted that the biometrics for food distribution project has greatly contributed in raising the bar for increased accountability and controls in large-scale, protracted refugee settings. The project allowed reinforcing confidence and credibility with both donors and the Kenyan Government. A donor representative expressed that the biometrics system has proven to be hugely successful at improving targeting to the most vulnerable and reducing operating costs. The outputs substantially exceeded expectation.<sup>10</sup>
- **69.** The project has opened opportunities for donors to further support WFP and UNHCR. For example, as a result of the increased accountability derived from the biometrics system, DFID decided in November 2013, to fund WFP for food distribution in Kenya for the first time. Previously, this sector was considered by DFID to be at greater risk of fraud.
- **70.** In view of the above, donors have expressed an interest in seeing the biometrics for food distribution project of Kenya replicated in other countries in the region. Following the successful implementation of the project in Kenya, UNHCR's Regional Support Hub (RSH) and WFP's Regional Office in Nairobi agreed to implement a regional policy of biometrics identification

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 $<sup>^{10}</sup>$  DFID annual report on "support for refuges" (5-9 May 2014) states the following:

<sup>&</sup>quot;...the scaling-up and mainstreaming of the WFP biometrics verification project has brought significant benefit to the planning and coordination of camp activities. The project represents the first time globally biometrics have been used in a refugee setting to verify eligibility for assistance. Since implementation, the number of people receiving assistance from the GFD has dropped significantly, attributed largely to a reduction in the number of ration cards being used illegitimately. This for the first time enables a more real-time, robust estimation of camp population outside verification exercises, thus allowing for better planning and monitoring. In order to be successful, the pilot has required good collaboration between WFP and UNHCR; for example, the sharing of manifest information and agreement on the ownership and storage of sensitive data. [..]

WFP's biometrics programme across Dadaab and Kakuma, and combined with the verification exercise completed by UNHCR last year in Dadaab only, has led to a substantial decrease in estimated refugee populations. [...] As of December 2013, the overall population in Dadaab and Kakuma using the food collection as a tracking indicator has been reduced by 17% (87,817). This decrease is largely attributed to a reduction in the number of ration cards being used illegitimately (e.g. host community populations registered as refugees and refugees that have left the camps and sold their ration cards).

UNHCR's subsequent quarterly report (January to March 2014) has indicated a further significant reduction in the number of people accessing food assistance. [...] the biometric system now makes it possible to monitor robustly overtime the changing population levels of the camps, as well as the genuine potential increases in refugee populations. Other WFP country programmes in protracted refugee settings are considering the application of biometrics and the Kenya office has hosted a number of exchange visits. ".





checks for food distribution in refugee operations, and to roll out the system in 2015-2016 to seven countries where both agencies have joint refugee assistance operations: Kenya (implemented), Ethiopia (2015 and 2016), Burundi (2015), Djibouti (2015), Rwanda (2015), South Sudan (2016) and Uganda (2016).

- **71.** The biometrics for food distribution in Kenya has permitted better crowd control at distribution centers and improved population inclusion. It also allowed obtaining reliable statistics on population in the camps.
- 72. The proGres (V3) database is UNHCR's primary tool to store information about refugees and asylum seekers registered by UNHCR in Dadaab and Kakuma, in order to facilitate the provision of protection and assistance. It is important to note that UNHCR is developing a centralized registration database proGres (V4) a new Global Distribution Tool (GDT) and the Biometrics Identification Management System (BIMS) offering enhanced functionality for food distribution than the original system was developed for. This new system has already been deployed in selected countries in Africa and Asia. Although the system in place in Kenya may not be applicable as such for other countries, the experience gained in Kenya remains very valuable, as many of the procedures, contractual agreements, communications strategies, equipment and other tools and documents developed in Kenya may be used for similar projects in other countries.
- **73.** The GDT and BIMS include all the food distribution functionalities currently available in the biometrics system used in Kenya. BIMS also provides additional technology such as iris scanning and fingerprints, and is an online system, accessible worldwide.



Objective 4: The UN staff members operating the system are fully trained and Standard Operating Procedure (SOP) manuals of the biometric identification system are maintained and include a robust business continuity plan in case of breakdown.

#### Observations:

- 74. The inspection team observed that the staff members operating the system were organized in teams reporting to WFP, UNHCR, private security companies or implementing partners (IP). The WFP staff includes ushers and interpreters, reception assistants and reception supervisors. The UNHCR staff includes litigation officers and IT specialists. The inspectors witnessed the food distribution process and observed a fully engaged staff performing their respective assignments and responsibilities diligently and were familiar with the system, processes and procedures. Staff confirmed that they had been fully trained for their respective duties and their supervisors were satisfied with their performance.
- **75.** The team reviewed the standard operating procedures (SOP) manuals and noted that they were comprehensive and presented the material in a simple and well-structured manner, with well laid out responsibilities for each staff team. The following SOPs were developed and made available to the staff/operators:
  - a) Standard Operating Procedures Guidelines for Implementing New Food Collection Procedures in Kakuma and Dadaab (18 March 2014)
  - b) Food collection procedures for refugees and asylum seekers registered and resident in camps in Kakuma and Dadaab, Kenya (March 2014)
  - c) New food collection procedures for new arrivals during an influx (January 2014)
  - d) New food collection procedures Pocket Guide for Community Sensitization
- **76.** Although foreseen in the SOPs, the weight machines at the end of the food corridors did not have stickers certifying that they had been inspected and calibrated as required. The inspection team would like to highlight the importance for WFP to ensure that all the weighing scales are regularly checked, calibrated and certified by an independent service provider. Each machine should be clearly marked by an up-to-date calibration sticker.
- 77. As indicated above, the inspection team considers the biometrics for food distribution system a good practice to be considered and/or replicated in other country operations. The lessons learned and good practices derived from the project have not yet been specifically documented. Both UNHCR and WFP would benefit from having such documentation, to be used as reference by other country operations.
- 78. The inspection team observed that to ensure business continuity in case of breakdown, UNHCR installed a mobile server with the database used for supporting the food distribution process. In the case of a power failure or shortage, this mobile server is brought to the food distribution center and connected directly to the system in order to ensure minimum disruption. It is used when all other means of connectivity have failed. Standard Operating Procedures on Deployment of Mobile Servers at the Food Distribution Centers were issued in September 2014. They ensure that UNHCR registration staff members know when to request and deploy the mobile servers to ensure continuity.





#### **Underlying causes of observations:**

**79.** WFP and UNHCR Kenya have been focusing on the implementation of the biometrics for food distribution system. Now that the system is successfully running, management can identify the good practices and lessons learned from the project.

#### **Implications:**

**80.** Other country operations would benefit from having documentation on the good practices and lessons learned in Kenya.

#### **Recommendations:**

4.1. UNHCR and WFP should prepare a 'lessons learned' document detailing good practices implemented during the biometrics project in Kenya and identifying pitfalls to avoid for future similar projects. This document will help other operations in implementing similar projects and might also be used for creating visibility in order to raise funds from donors ('advertise our success stories').

#### **Management Comments:**

**81.** UNHCR Kenya: Recommendation 4.1 is accepted by UNHCR Kenya.

Target implementation date: December 2015



## Objective 5: An appropriate communication strategy has been implemented towards beneficiaries so that they can understand their rights and obligations as far as data protection is concerned.

#### **Observations:**

- **82.** On 8 February 2013 the WFP Country Office in Kenya and FilmAid International (based in Nairobi), signed an agreement on the development of messages and implementation of a communications strategy to raise awareness on the use of biometrics for food distribution in the Dadaab and Kakuma refugee camps in Kenya. The duration of the campaign was planned from February to July 2013 and was aimed to reach 560,000 beneficiaries in both camps. The overall budget for the campaign was USD 68,702. The campaign went live from March 2013 onwards.
- **83.** The communication and awareness campaigns aimed to ensure that refugees in Kakuma and Dadaab camps were well versed on the (i) the reasons why the new procedures were being implemented; (ii) the details of the new procedures and how they would change general food distributions; (iii) refugees' rights and obligations under the new procedures, and the different levels and mechanisms for appeal; (iv) the persons eligible to nominate an alternate food collector and how to go about it; and (v) the outcome, for food collectors, of missing two or more consecutive food distribution cycles.
- **84.** The target audience were the general refugee population in both Kakuma and Dadaab camps. Special attention was given to women and girls who were mostly tasked with food collection. In addition, various influential opinion leaders in the camp such as block/zone refugee leaders, teachers, agency workers and Food Advisory Council members were consulted.
- **85.** The elements of the communication and awareness campaign included (i) short films on new food collection procedures (specific versions for Dadaab and Kakuma), (ii) live radio interviews with call-in questions; (iii) radio spots in Somali, Swahili and Juba Arabic; (iv) self-explanatory posters; (v) screenings at Food Distribution Points (FDP); and (vi) daytime and evening screenings with facilitated post-screening discussions.
- **86.** In August 2013, WFP and UNHCR evaluated the effectiveness of the communication strategy by surveying a representative sample of refugees in each camp. The refugees were asked whether or not they were aware that WFP and UNHCR were changing the procedures for collecting food. In Kakuma camp the awareness rate was very high (90%), but not in Dadaab, where it only reached 20%. When asked which households were eligible to nominate an alternate, 45% of refugees in Kakuma and 13% in Dadaab said they did not know. An even higher number of refugees said that they did not know the process for nominating an alternate (69% in Kakuma and 44% in Dadaab). The results of the evaluation were published on 21 November 2014 in a WFP/UNHCR monitoring and evaluation (M&E) report.
- **87.** The inspection mission met with refugee leaders and interviewed NGO staff at the FDPs. In general, the beneficiaries were satisfied with the new food collection procedures. The majority of refugees understood well the new procedures and appreciated that food distribution was more transparent and fair. However, there was an obvious deficit in the knowledge about the procedure to nominate alternate food collectors in case the beneficiaries could not collect the





food in person for a variety of reasons (childcare, unaccompanied minors, handicapped and sick beneficiaries, etc.). Radio transmissions and public information, using posters, television monitors and public announcement systems both in the food distribution points and inside the refugee camps have shown to have the most outreach to the beneficiaries.

#### Underlying causes of observations:

- **88.** The population in the camps, being quite mobile and with newcomers arriving every day, necessitated maintaining a constant level of communication to ensure that all the refugees were adequately informed about the biometrics system.
- **89.** The low rate of awareness (20%) observed in Dadaab camps was mostly due to the fact that refugee leaders were vehemently opposed to the introduction of the new controls, and had actively sabotaged the communication campaign.

#### **Implications:**

**90.** Timely and comprehensive information to the beneficiaries is a key success factor of the biometrics project. The initial campaign was well prepared and executed, using a holistic multimedia approach and included the community in the campaign. The mission received feedback from beneficiaries and from refugee representatives that, partly due to growing influx of new refugees, the awareness campaign about the biometric registration procedures needed to be reinforced and repeated. The mission also observed that there was a deficit of information regarding the procedure for the selection and nomination of alternate food collectors. Without sufficient knowledge by the refugee population, UNHCR and WFP may face the risk that eligible and vulnerable beneficiaries may have no or only limited access to food aid.

#### **Recommendation:**

5.1. The information awareness campaign should be re-launched in 2015. Special emphasis should be placed on the procedure for the nomination and selection of alternate food collectors.

Furthermore, the information awareness campaign should include information on how the biometric data is protected so the beneficiaries can understand their rights and obligations as far as data protection considerations are concerned.

#### **Management Comments:**

**91.** Tacit acceptance of the recommendation-No specific comment received.

Target implementation date: December 2015



## **Objective 6:** Any other matter of common interest that would add value to the current registration system.

#### Observations:

- **92.** Since the implementation of the biometrics system for food distribution in Kenya, new promising applications and opportunities for improvement have been identified and are being analyzed:
  - a) UNHCR is considering using the biometrics solution and process developed jointly with WFP for distributing non-food items, such as blankets and kitchen utensils to persons of concern;
  - b) During crisis periods, UNHCR issues temporary cards (called "tokens") to refugees who are not registered, so that they could access food and non-food items. Fingerprinting tokenholders is an important control to ensure that each household receives only one token and to prevent previously registered refugees from posing as new arrivals and getting more assistance than what they are entitled to.
  - c) UNHCR and WFP, along with their partners, are constantly analyzing options for enhancing internal controls and further automating and streamlining the biometrics for food distribution system. The concept of e-Manifest is being considered, to replace the daily paper manifests currently in use during the distribution cycles. The paper manifests contain the list of ration card numbers included in the food distribution of the day. The e-Manifest is a simple and automated tool designed to assist partners working in the food distribution centers with the tracking of food and non-food items distribution.
- 93. WFP is in the process of implementing a cash and vouchers programme in Kenya. The biometrics system is a key tool for establishing strong controls for this programme. WFP has gathered evidence through pilots, evaluation and market studies that cash and vouchers can improve the effectiveness of food assistance in the camps by giving beneficiaries more choice in what they eat. This would strengthen local food markets and improve likelihood opportunities for refugees and host communities alike. Electronic vouchers (e-vouchers) are electronic coupons issued to a refugee with a determined value. Vouchers can be used in participating retailers' shops to purchase food or non-food items. WFP successfully conducted an e-voucher pilot project in Dadaab in 2013, using Kenya's mobile money platform (*M-Pesa*)<sup>11</sup>, which offers electronic cash wallets on SIM cards in mobile phones. *M-Pesa* agents operate in all the refugee camps in Kenya. WFP is planning to progressively replace part of the food basket distributed in the refugee camps by e-vouchers. The infrastructure put in place by WFP to deliver the electronic vouchers is perceived to be able to serve as a multi-agency, multi-sectorial platform for market-based assistance in the camps.
- 94. Collaboration on information management is set out in the latest global MoU (signed in January 2011 between UNHCR and WFP. This MoU commits the two agencies to collaborate on developing mechanisms for exchanging personal data of refugees and asylum-seekers for the purpose of food distribution which will enhance the integrity of the system. Since then, significant developments have taken place in the area of biometrics and its use in refugee identification systems, including for the purposes of food distribution.

<sup>&</sup>lt;sup>11</sup> M-Pesa (*M* for mobile, *pesa* in Swahili for money) is a mobile-phone based money transfer and micro-financing service, launched in 2007 by Vodaphone for Safaricom and Vodacom, the largest mobile network operators in Kenya and Tanzania.





The joint inspection team considers that these developments and the positive experience in Kenya need to be officially reflected in a revised version of the cooperation agreement between UNHCR and WFP.

#### **Underlying causes of observations:**

- **95.** The scope of the project conducted jointly by UNHCR and WFP did not include the distribution of non-food items. The proven efficiency and effectiveness of the project has opened doors for this new application.
- **96.** The concept note of the e-Manifest was prepared by UNHCR in October 2011, but due to project constraints, the concept has been de-prioritized.
- **97.** Development agencies are increasingly challenged to show and deliver measurable impact to the refugees. Donors are increasingly focusing on value for money. DFID and ECHO have expressed an interest in diversifying food assistance transfer modalities in Kenya, and in supporting WFP in the development of a more market-based approach to refugee assistance using cash and voucher transfers. The 2014 Joint Assessment Mission (JAM) highlighted that the vouchers project would have multiple benefits with overall improvement in food security and nutrition for the refugees and host communities such as:
  - a) Enhancement of business volume for both refugees and the host community;
  - b) Improved dietary diversity;
  - c) Enhanced host community relations with refugees and agencies through formation of trade partnerships; and
  - d) Creation of employment and interrelated livelihood activities.
- **98.** The latest global MoU between UNHCR and WFP does not explicitly identify the use of biometrics registration as a tool that ensures the accuracy of refugee statistics management and enhance the oversight of food distribution systems.

#### **Implications:**

- **99.** Using biometrics for non-food distributions will help UNHCR reinforce the necessary controls for ensuring that distributions are targeted to the genuine beneficiaries.
- **100.** The daily manifests are currently used by WFP's implementing partners involved at the food distribution centers. Implementing the e-Manifest will require granting the IPs limited access to the UNHCR proGres database without jeopardizing the confidentiality and integrity of the information stored in the database.
- **101.**The implementation of the e-Manifest will allow discontinuing the use of tokens, especially in Dadaab. It will be a step towards considering abandoning the use of paper-based ration cards in favor of a fully automated identity recognition system.
- **102.**Substituting part of the food ration with electronic vouchers represents a significant change for WFP's operation, and will have a major impact on the dynamics of the refugee camps. Indeed, the process of delivering electronic vouchers through the *M-Pesa* platform appears to be easy to integrate with the biometrics for food distribution system.
- **103.**The lack of a reference in the global MoU between WFP and UNHCR leaves the adoption of a commonly agreed biometrics identification system for the purposes of food distribution at the discretion of senior managers in UNHCR and WFP Country Offices.



#### **Recommendations:**

- 6.1. The OIG/IGO inspection strongly supports UNHCR's initiative to extend the use of biometrics to non-food distributions and to move away from the use of temporary tokens. UNHCR Kenya is invited to further analyze the opportunity of using the biometrics system and the process developed jointly with WFP in the framework of non-food distributions, while ensuring that food and non-food assistance is targeted at the household level to reach genuine beneficiaries, especially the most vulnerable populations.
- 6.2. UNHCR and WFP, along with their partners in the field, should further analyze the possibility of implementing the concept of an e-Manifest without jeopardizing the confidentiality and integrity of the data in proGres.
- 6.3. The biometrics system is a key tool for establishing sound controls for the cash and vouchers programming that WPF is in the process of implementing in Kenya. In line with the global 2014 UNHCR and WFP Joint Assessment Mission and Joint Plan of Action on cash and vouchers, the OIG/IGO inspection recommends a coordinated analysis and/or implementation of cash and voucher-based interventions in refugee operations in Kenya. It also invites UNHCR Kenya to conduct a feasibility analysis of the use of e-vouchers in the framework of non-food assistance during emergency interventions.
- 6.4. The 2011 global MoU between UNHCR and WFP should be revised (or supplemented) to reflect the results of the Kenya biometrics identification system for food distribution purposes, as well as UNHCR's adoption and introduction of BIMS.<sup>12</sup>

#### **Management Comments:**

**104. UNHCR Kenya:** The recommendations are accepted by UNHCR Kenya.

- Recommendation 6.1.: The cash and vouchers systems will be introduced during the 2nd half of 2015. Distribution of NFIs is already happening in Kakuma through biometrics. The biometrics system is also used for other protection and assistance interventions.
- Recommendation 6.2.: The use of the e-manifest is already being discussed. The expected cost to implement the e-manifest is about 20,000 USD.
- Recommendation 6.3.: A feasibility study on the use of the voucher is underway involving Headquarters, Dadaab and Kakuma. A consultant is being identified.

#### UNHCR Geneva:

 Recommendation 6.3.: UNHCR believes that the revised MOU should include a joint corporate commitment to fundraise and implement the next generation of this biometrics system in UNHCR-led refugee operations with food and non-food components.

#### WFP:

 Recommendation 6.3.: WFP considers that a global data-sharing agreement between the two agencies would also be important to support biometrics, as well as the cash and vouchers programming.

**Target implementation date:** December 2015 (6.1. and 6.3.), timeframe to be decided upon between UNHCR and WFP Kenya (6.2.)

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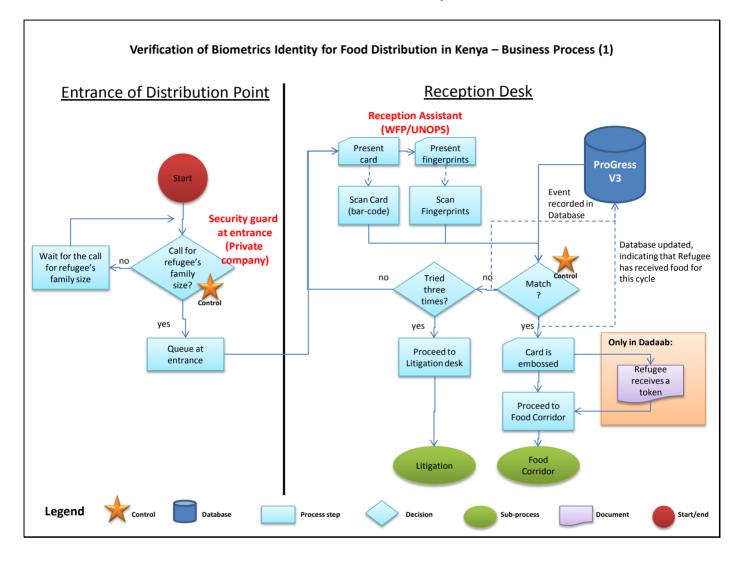
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<sup>&</sup>lt;sup>12</sup> This recommendation does not imply than WFP should be responsible for food distribution on all operations.





#### Annex A - Business Process description

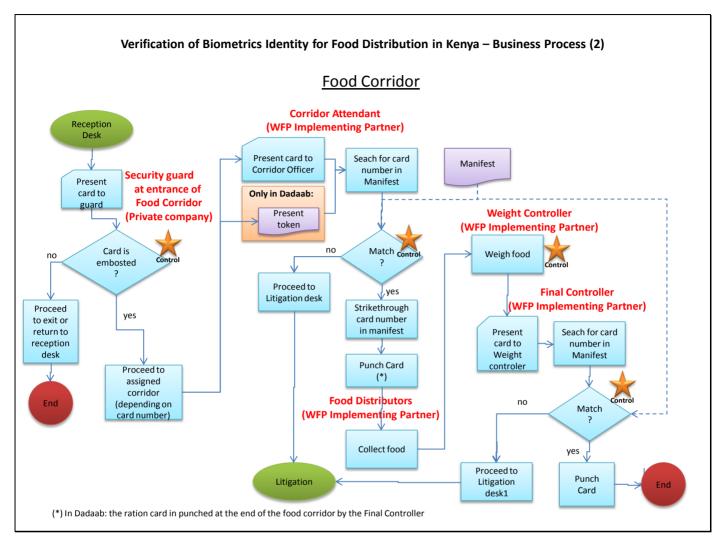


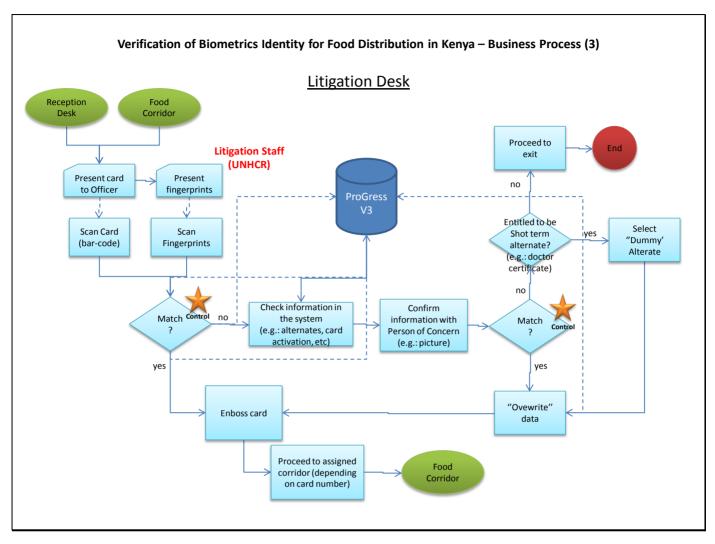




Programme | Programa Alimentaire | Mundial de Mondial | Alimentos











## Annex B – Analysis of food distribution savings due to biometrics system (September 2013 – May 2014)

Month: Food Distribution Cycle	Registered Population Manifest	Population Actually Fed	O/w Attributable to Natural Population Increase (Decrease)	Population Fed Attributable to Biometrics System: Excl. cum. natural pop. Increase /decrease	% of Difference of Biometrics Pop. Fed based on Sep 2013 Baseline	Food Saved as Result of Biometrics (MT)	USD Equiv. Saved as Result of Biometrics	Cumulative Savings Due to Biometrics (USD)
Sep 2013: 2nd	529,529	528,089						0
Oct 2013: 1st	531,525	495,398	1,996	493,402	7%	291.4	293,433	293,433
Oct 2013: 2nd	531,834	485,147	2,305	482,842	9%	405.4	408,282	701,715
Nov 2013: 1st	532,020	468,015	2,491	465,524	12%	394.2	395,615	1,097,330
Nov 2013: 2nd	491,950	448,814	3,090	445,724	16%	518.9	520,816	1,618,147
Dec 2013: 1st	471,983	445,616	3,595	442,021	16%	542.2	544,231	2,162,378
Dec 2013: 2nd	451,349	440,272	4,280	435,992	17%	618.9	621,177	2,783,554
Jan 2014: 1st	471,277	451,077	5,709	445,368	16%	694.9	699,770	3,483,325
Jan 2014: 2nd	473,703	450,408	7,501	442,907	16%	763.2	768,635	4,251,960
Feb 2014: 1st	480,552	452,830	10,215	442,615	16%	718.0	723,064	4,975,024
Feb 2014: 2nd	488,645	454,939	29,130	425,809	19%	744.6	749,868	5,724,892
Mar 2014: 1st	489,776	464,191	33,601	430,590	18%	819.0	824,786	6,549,678
Mar 2014: 2nd	492,747	468,470	40,362	428,108	19%	895.8	902,166	7,451,843
Apr 2014: 1st	502,580	470,003	49,161	420,842	20%	900.9	907,253	8,359,097
Apr 2014: 2nd	499,204	466,589	44,522	422,067	20%	890.6	896,889	9,255,986
May 2014: 1st	499,531	472,808	48,770	424,038	20%	874.0	880,214	10,136,199
May 2014: 2nd	501,283	469,999	53,584	416,415	21%	1,000.6	1,007,678	11,143,877
Monthly Average (October 2013 - May 2014)							1,392,985	1,392,985





## Annex C – Calculation of the return on investment of the biometrics for food distribution project

#### **Assumptions:**

- The life expectancy of the project oscillates between 5 and 10 years;
- The population actually fed and the actualized price of the commodities remain stable during the entire life expectancy of the project;
- The actualized expected monthly savings due to the biometrics system equal USD 1,887,892 (savings observed in May 2015), and remains unchanged along the entire period considered;
- The actualized yearly actual expenditures related to the biometrics system remain stable during the entire life expectancy of the project, and are equal to 90% of staff costs observed in 2014 (efficiency savings of 10%), and 50% of IT, Construction and Other costs observed in 2014;
- The inflation is estimated at 6% per year;
- The initial investment equals the cumulated actual expenditures incurred for the project in 2012-2014.

#### **Detailed calculation:**

In USD	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Initial investment	5,142,875									
Direct costs	1,302,966	1,329,025	1,355,605	1,382,717	1,410,372	1,438,579	1,467,351	1,496,698	1,526,632	1,557,164
Yearly Savings	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704	22,654,704
Net balance	16,208,864	21,325,679	21,299,099	21,271,987	21,244,332	21,216,125	21,187,353	21,158,006	21,128,072	21,097,540
Actualized ROI (5 years)	1297%									
Actualized ROI (7 years)	1896%									
Actualized ROI (10 years)	2670%									

#### Annex D - List of Acronyms

AFC Alternate Food Collectors

AES Advanced Encryption Standard

BIMS Biometrics Identification Management System

BIS Biometric Identification System

DFID Department for International Development

DRA Department for Refugee Affairs

ECHO European Commission's Humanitarian Aid and Civil Protection Department

FAC Food Advisory Committee
FI FilmAid International
FDPs Food Delivery Points
GDT Global Distribution Tool

IGO UNHCR Inspector General's Office

JAM Joint Assessment Mission
IP Implementing Partner
JPA Joint Plan of Action
LoA Letter of Agreement

MoU Memorandum of Understanding

MT Metric tons

OIG WFP Office of the Inspector General

ROI Return on Investment

SOP Standard Operating Procedure

ToR Terms of Reference

TWG Technical Working Group

UNHCR Office of the United Nations High Commissioner for Refugees

UNOPS United Nations Office for Project Services

USAID United States Agency for International Development

WFP World Food Programme