



# Morocco - A regionally designated centre for deuterium dilution techniques enables capacity building in the region and informs Moroccan nutrition policies and programmes

Hassan AGUENAOU

19–20 September 2017

IAEA Scientific Forum

**Nuclear Techniques  
in Human Health**

*Prevention, Diagnosis, Treatment*

**RDC-Nutrition  
Ibn Tofaïl University - CNESTEN**

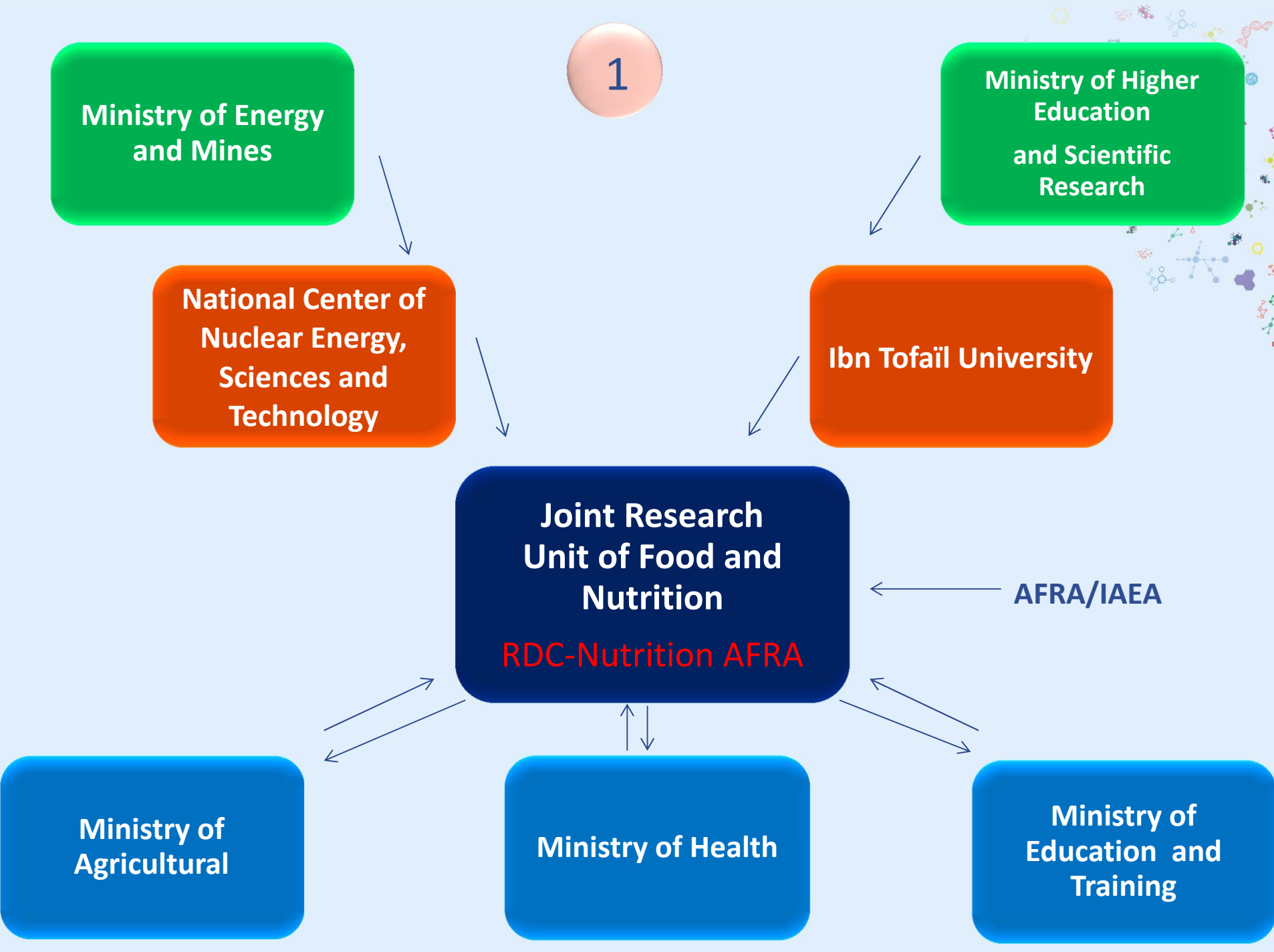


Unité Mixte de Recherche  
en  
Nutrition et Alimentation  
URAC 39 associée au CNRST

Centre Régional Désigné de  
Nutrition AFRA/IAEA

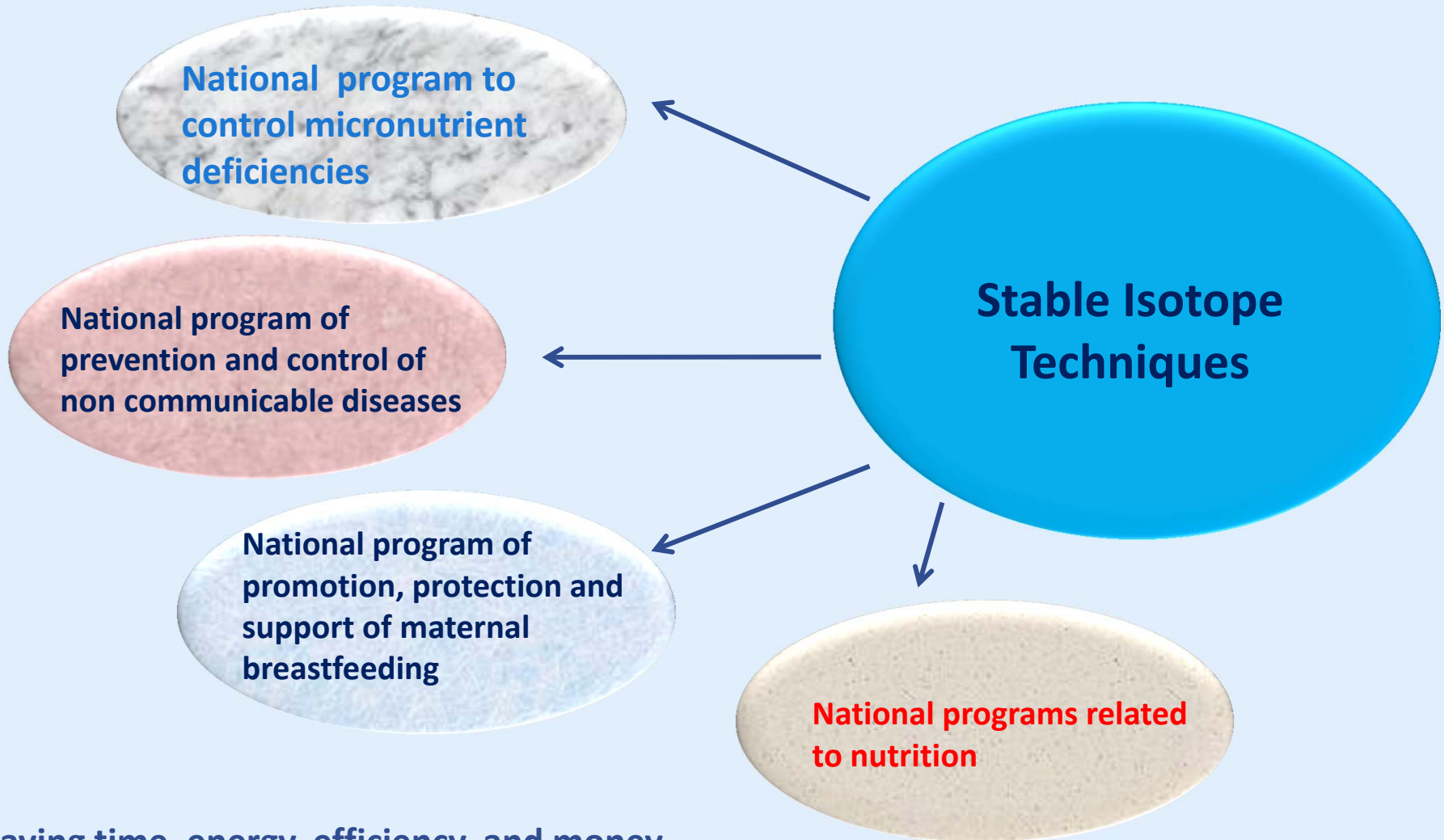


CNESTEN



2

# Role of stable isotopes in National Nutrition Programs?



Saving time, energy, efficiency, and money

3

# Impact: Example of Iron Bioavailability

National Program to Fight Micronutrient Deficiencies :  
*the Case of Iron-Fortified Flour*

Prevalence of anaemia:  
Pregnant women 37%  
Women of childbearing age 36%  
Children under 5 years old 31%

Four years later

Anaemia prevalence has not changed!!  
Thinking of changing iron fortificant!

Introduction of fortified wheat flour with elementary iron

Decision to change the premix in wheat flour



Study of the bioavailability of a different iron compound

**IAEA supports choice of iron to fortify staple food to better tackle anaemia**



4

# Impact: Example of exclusive breastfeeding



**NATIONAL PROGRAM  
PROMOTION,  
PROTECTION AND SUPPORT FOR  
MATERNAL BREASTFEEDING**

**Exclusive Breastfeeding  
(6 Months)**



**27,8% by conventional methods  
12,7 % by stable isotopes**

The results will be used for adjusting  
the breastfeeding promotion programmes

5

# How did we become an AFRA RDC in Nutrition?

2012

Government

**AFRA RDC-Nutrition**

IAEA

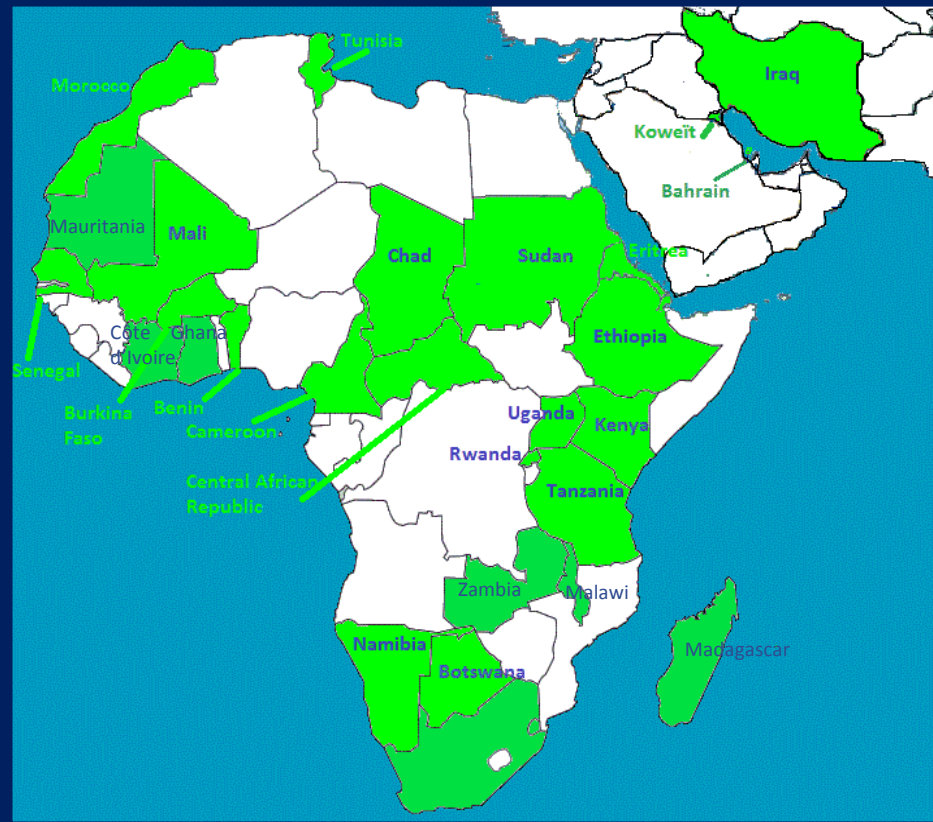
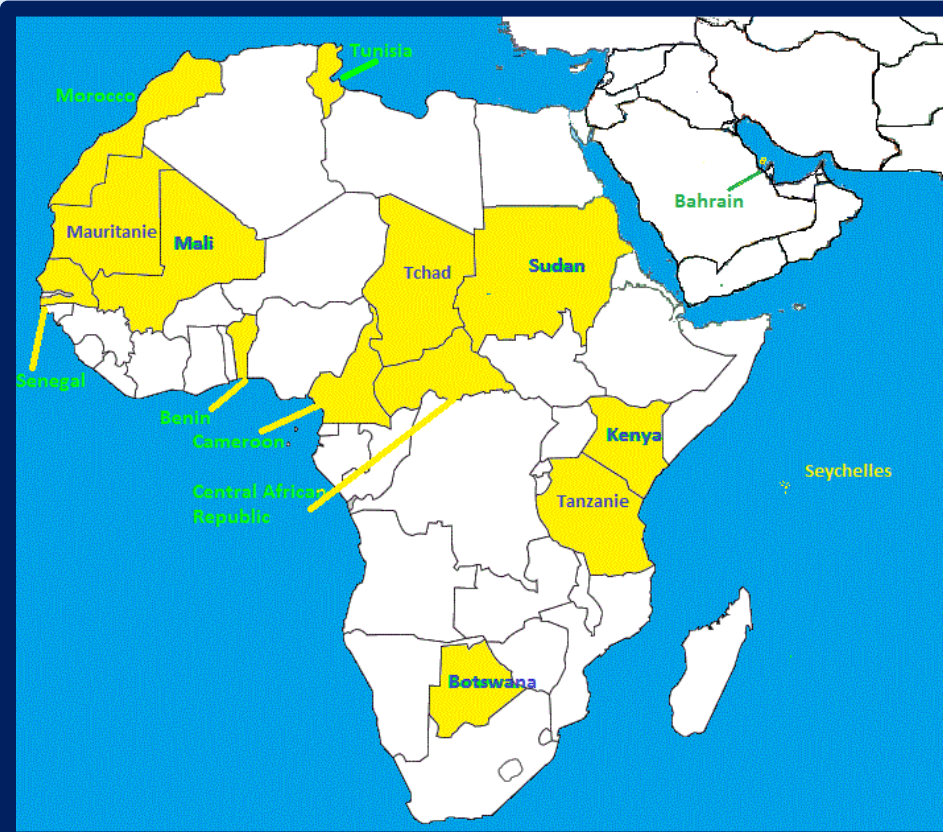
Ministries  
PM  
NLO  
AFRA-NR



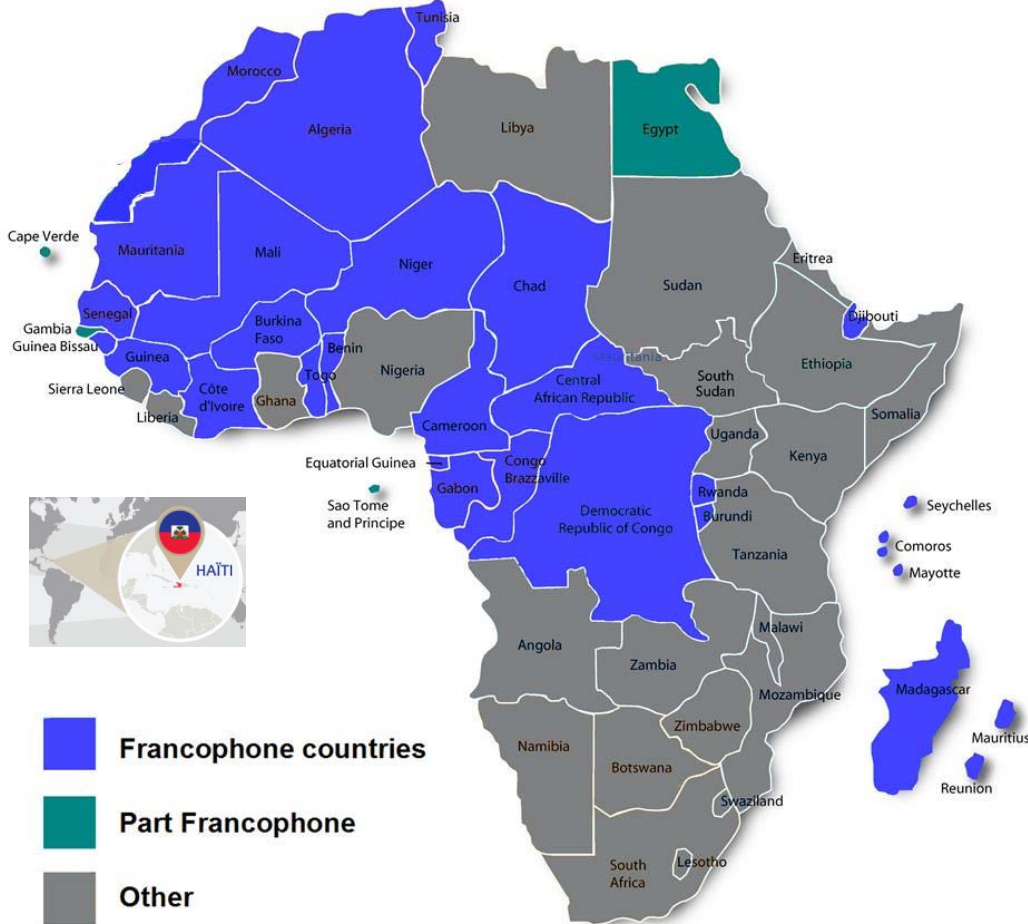
# 6 Transfer of know-how?

Expert services

Individual & Group Trainings



# Win-Win partnership?



<http://www.plan-francophone.com>

PhD  
 Expert Services  
 Ministry of Health  
 Ministry of Agriculture  
 Private Sector  
 WHO  
 UNICEF  
 FAO  
 Other countries







**Thank You  
Merci**