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Nutritional & Health-Related Environmental Studies Newsletter

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To Our Readers



*Schoolchildren in Uganda taking a dose of deuterium to assess body composition
(Photo courtesy of G. Munthali)*

It is with great excitement we welcome you to the first edition of the NAHRES E-Newsletter! We intend to issue an E-Newsletter several times per year to share information about our latest projects, events, publications and more.

Adequate nutrition is a fundamental cornerstone of development. The burden of malnutrition hinders the advancement of individuals, communities and countries and a concerted effort is needed to combat malnutrition in all its forms. The Nutritional and Health-Related Environmental Studies section of the IAEA complements the efforts of other UN agencies and NGO's by supporting the use of nuclear techniques to understand changes in body composition following an intervention, and how the body is using the nutrients in the food we eat. This information helps nutrition policymakers decide what interventions will be most effective to reduce malnutrition. This mandate resonates with Article II of the IAEA's Statute: "The Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world."

Nuclear techniques add value by improving the specificity and sensitivity of nutritional evaluations such as the assessment of body composition, total daily energy expenditure, intake of human milk in breastfed infants, vitamin A status, and bioavailability of micronutrients from foods. The IAEA has promoted extensive use of these techniques in Member States through supporting national and regional nutrition projects via the [Technical Cooperation Program](#) and through [Coordinated Research Projects](#) addressing priority areas in nutrition.

Congratulations to Najat Mokhtar, our former Section Head, on her recent appointment as Director in the IAEA Technical Cooperation Department, Division for Asia and the Pacific. We wish her well in her new position.

All of us at NAHRES join in sending season's greetings and good wishes for the coming year.

*Christine Slater
NAHRES, Acting Section Head*

Meetings

1) Consultants' Meeting on Bioavailability of Proteins from Plant Based Foods

International experts gathered at IAEA HQ in Vienna (15-18 December 2014) to prepare a proposal for a new Coordinated Research Project on bioavailability of proteins from plant based foods as they are prepared and consumed by humans. Many people rely on plants for their main source of protein, either for religious or economic purposes, especially in low income countries. Yet, there is very little information on the effect of cooking and food preparation on the bioavailability of proteins and amino acids in mixed meals. Changes in bioavailability can occur during cooking, e.g. due to the Maillard reaction between amino acids and sugars in foods. A new Coordinated Research Project will develop novel stable isotope techniques to non-invasively study the effect of cooking on bioavailability of amino acids and proteins in plant based meals.

2) IAEA/IMTF Technical Meeting to promote capacity building in clinical and community nutrition by establishing and developing Communities of Practice in the context of Scaling Up Nutrition (SUN) Movement 24-26 November 2014 Vienna, Austria

Severe acute malnutrition (SAM) still has unacceptably high prevalence in many parts of South-East Asia and sub-Saharan Africa, and represents a major challenge because the services available for community based care are poor, increasing the likelihood of complications that require hospital based care. The availability of facilities, clinical skills and resources for the clinical treatment of SAM with complications are not adequate. The need to involve and mobilize communities for pre-emptive out-patient care and appropriate referral for facility based care requires an adequately trained work force capable of delivering the service to an acceptable standard, within a care system that functions effectively and ensures adequate supplies. A major limiting factor is the lack of trained local capacity operating within a system designed to tackle malnutrition in a sustainable and self-reliant manner. Development of a harmonized platform in support of the best standard of integrated management of acute malnutrition is absolutely dependent upon the availability of secure human and technical capacity in the health sector itself, but also across all relevant sectors. Capacity building should therefore be recognized as an essential component in assisting countries to address this problem effectively. To this end, the IAEA will support a session at the Federation of African Nutrition Societies (FANUS) congress in Arusha, Tanzania, May 2015.

3) International Symposium on Understanding Moderate Malnutrition in Children for Effective Interventions 26-29 May 2014 Vienna, Austria

The International Atomic Energy Agency hosted the Symposium on Understanding Moderate Malnutrition in Children for Effective Interventions to help bridge recent research findings and technological advances with operational approaches and policy-development processes. The symposium was a success with over 350 individuals in attendance including government representatives, nearly 70 national and international organizations from the United Nations and non-governmental sectors, universities from around the world, as well as donor governments and private-sector entities. The event was structured around nine sessions, progressing from an analysis of the problem on a global scale to recent research findings relevant to designing effective interventions. Find photos, interviews and footage of presentations here: <http://www-pub.iaea.org/iaemeetings/46087/International-Symposium-on-Understanding-Moderate-Malnutrition-in-Children-for-Effective-Interventions>



Participants engaging in a question and answer session at the symposium
(Photo courtesy of D. Calma)

News

Coordinated Research Project on Vitamin A



Child taking a dose of labelled retinol in Mexico (Photo courtesy of V. Lopez-Teros)

This CRP will address methodological issues in the application of the stable isotope dilution technique to accurately determine vitamin A stores in children under the age of 5 years. It will contribute to a better understanding on whether the method is valid under conditions of hypervitaminosis A, inflammation and selected micronutrient deficiencies. The CRP will be complementary to a grant of the Bill & Melinda Gates Foundation that assesses the risk of vitamin A toxicity due to large scale food fortification and other interventions with the University of Newcastle as grantee.

For more information about this new CRP, please visit our web-site: <http://www-naweb.iaea.org/nahu/nahres/crp.html>. Research institutions in Member States interested in participating in this CRP are invited to submit proposals by **10 January 2015** directly to the Research Contracts Administration Section (NACA) of the International Atomic Energy Agency: Official.Mail@iaea.org or to Ms. Cornelia Loechl: C.Loechl@iaea.org. The forms can be downloaded from <http://www-crp.iaea.org/html/forms.html>.

To find more information on our Section's work, including E-learning modules or publications available for download, please consult the IAEA's resource centre, the [Human Health Campus](#).

IAEA Nutrition Factsheets, brochures, and multimedia material are also available here: <http://nucleus.iaea.org/HHW/Nutrition/>

Success Story

During the IAEA's 58th General Conference, a side event was co-hosted by NAHRES and the Department of Technical Cooperation to emphasize the role of partnerships in addressing malnutrition, and to discuss how collaboration through partnerships has yielded successful results.



IRSS old facilities (Photo courtesy of A. Zeba)

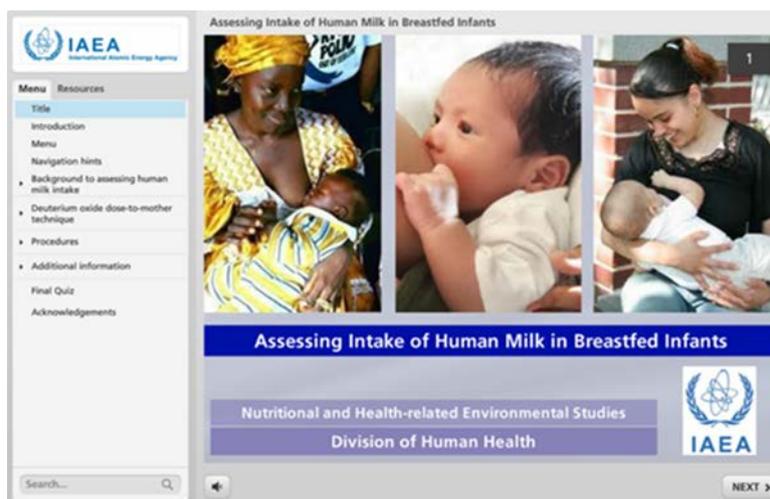


IRSS new facilities (Photo courtesy of A. Zeba)

Augustin Zeba, from the Institut de Recherche en Sciences de la Santé (IRSS) at the Délégation régionale de l'Ouest-Bobo-Dioulasso in Burkina Faso, commended the IAEA for its involvement in the successful treatment of both malaria and malnutrition in children in the region. The IRSS has gone through a major transformation in the last ten years. The institute has grown from two scientists working in a dated building, to a staff of more than 200 employees, including Master's degree and PhD holders, working in a newly renovated building with well-equipped laboratories that also serve as a training center. These improvements have "allowed us to cross borders and work with other partners in the research field," said Mr. Zeba. "We can now look to IRSS as becoming an IAEA collaborating center in the nutrition field in French-speaking Africa."

Educational and Training Resources

E-Learning Modules



The IAEA is currently revising its e-learning modules to make them more interactive to enhance the self-directed learning experience and provide the potential to improve efficiency in education and expand educational opportunities. The modules use different media formats. The first revised version, Breast Milk Intake, is available as a trial here: <http://nucleus.iaea.org/HHW/Nutrition/MilkIntake/>

Publications



The IAEA Human Health Series was developed by an international group of experts as an integral part of the IAEA’s efforts to contribute to the transfer of technology and knowledge in nutrition. These publications are meant to assist Member States in their efforts to combat malnutrition by facilitating the use of relevant nuclear techniques. They provide information on the theoretical background as well as the practical application of state of the art methodology. The publications can be downloaded from the [IAEA Human Health Campus](http://humanhealth.iaea.org).

The NAHRES Team

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We appreciate your feedback! If you have any questions or comments, please send them to nahres@iaea.org

Impressum

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