Jacob Williams outlined the aim of the meeting, which was to examine (1) improving country access to products, (2) using multi-vector interventions and (3) World Health Day 2014 and its theme ‘Vector Borne Diseases’. The meeting also aimed to identify the bottlenecks to accessing vector control products that are within the power of endemic countries to remove.

1. Improving country access to products

**Experiences on harmonized sub-regional requirements (OCEAC) – Josiane Etang, Organisation de Coordination pour la lute contre les Endémies en Afrique Centrale (OCEAC), Cameroon**

OCEAC is the Organisation for the Coordination of Endemic Disease Control in Central Africa, founded in 1963 and operational in Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon and Chad. OCEAC aims to coordinate research, training and expertise to target malaria and other major infectious diseases. An example of a new regionally-coordinated program is the Drug Policy Harmonization Programme, launched February 2014 in Libreville, Gabon. Access to vector control products can be improved through close coordination with manufacturers and timely registration of new products.

**Improving market entry of vector control products – Gerhard Hesse, Bayer S.A.S. Environmental Science, France**

An outline of National and Regional Regulatory Authorities in the European Union (Biocidal Product Regulation (BPR)), Africa (Interstate Committee for Drought Control in the Sahel (CILLS), Southern African Development Community (SADC)) and Middle East and Asia (Gulf Cooperation Council (GCC)) was given. Standalone National Regulatory Authorities necessitate a dossier submission, potentially with repetition of efficacy studies if the situation is unique. In the best case scenario for vector control products, there would be (1) a WHO evaluation and recommendation (e.g. WHO Pesticide Evaluation Scheme (WHOPES)); (2) regionally harmonised acceptance of dossier and results based on WHOPES; and (3) in unique eco-epidemiological situations, a local scheme for efficacy with acceptance of a general data package, based on WHOPES, BPR and Environmental Protection Agency (EPA) for example.

**Update on related activities by WHO – Raman Velayudhan, World Health Organization, Switzerland**

WHOPES continues to evaluate and recommend vector control products for use in public health. In collaboration with the Food and Agriculture Organization of the United Nations (FAO), specifications are developed for all pesticides. Countries are encouraged to use standard WHO evaluation procedures to assess vector control interventions. Quality control is a major issue today and countries are requested to take this into account when buying and using products. The Vector
Control Advisory Group is now fully operational and nine items comprising five new paradigms were evaluated at the latest meeting. Future submissions are welcome for consideration at the meeting in November 2014. WHOPES continues to support capacity development in countries on sound management of pesticides.

Discussion

OCEAC procedures could be used as a template for other countries and regions such as the Economic Community of West African States (ECOWAS). Some regulatory procedures such as CILLS or SADC are efficient and easy for industry but others less so. Communication between regulatory authorities could improve procedures and speed. Having one registration for a region is efficient and this system could be expanded. In agriculture, there is a history of collaboration between countries. The Innovative Vector Control Consortium (IVCC) has held a series of meetings to ensure good laboratory practice to meet OCEAC and other requirements. Countries can take responsibility for product quality control while delegating the process of registration to regional networks. In southern Africa, regulatory documentation has recently been coordinated such that registration can be attained simultaneously for multiple countries.

2. Using Multi-Vector Interventions

Project Update: Framework for Integrated Vector Control – Steve Lindsay, Durham University, UK

Definitions of Integrated Vector Management (IVM) vary; IVM pertains both to the use of multiple tools (often outside the health sector) for one disease; and to the use of one tool for multiple diseases. The overall goal is of this project is to develop a handbook for vector control managers at the national (and province) level, ideally available as an online tool. As the first stage, a systematic review has been conducted to review all interventions against all vector-borne disease, for example long-lasting insecticide treated nets (LLINs) against leishmaniasis. The study is also evaluating where vector-borne diseases are co-endemic by mapping the distributions of different diseases including Plasmodium vivax, P. falciparum, onchocerciasis, dengue and leishmaniasis. For example, there is a belt across central Africa and areas of South America and Asia where long-lasting insecticide-treated nets (LLINs) can be used to control both leishmaniasis and malaria. Modelling is also being used to assess the potential impact of using one tool against two diseases transmitted by one vector (e.g. Anopheles gambiae, malaria and lymphatic filariasis) and preliminary results suggest a multiplicative effect. The handbook will cover which tools to select, how to implement them and how then to monitor and evaluate. Funding from the Bill and Melinda Gates Foundation was acknowledged.

Discussion

- Evidence for vector control policy:
  - The importance of building an evidence base to determine which tools should be used and where was stressed. Given the large number of combinations of interventions, assimilating sufficient evidence for each combination may be problematic, however in attempting to do so it will become apparent where data are missing and where research is needed. For example, the recent Cochrane Review of larvivorous fish found insufficient evidence to support their use in larval control.
- Standards for evidence may be too high; Cochrane reviews are useful but a mid-level or historical evidence could be acceptable. However policy makers look for the highest quality evidence.
- In systematic reviews of vector control interventions, entomological data is problematic given non-standardised methods of collection and poor reporting.
- Despite the lack of evidence for some interventions, there may still be opportunities for integrating surveillance and other infrastructure in order to gather at least some evidence for effectiveness. Systems of sentinel sites for long-term monitoring of clinical and entomological outcomes, in the context of existing interventions and the occasional introduction of new paradigms, would be informative. The US Centers for Disease Control (CDC) is working to establish ten sentinel vector sites globally.
- By building maps of different diseases it will be possible to quantify the burden of diseases globally. Other diseases become increasingly obvious as malaria declines; for Africa, mosquito abatement is the long-term aim.

- The WHO Regional Office for Africa (AFRO) published an IVM guide for Africa in 2002.

3. World Health Day 2014 - theme ‘Vector Borne Diseases’

**Brief on World Health Day and the role of RBM partners in advocacy – Raman Velayudhan, World Health Organization, Switzerland**

World Health Day is celebrated on 7th April each year to mark the anniversary of the founding of WHO in 1948, with an annual theme. This year, for the first time in two decades, the theme is ‘Vector Borne Disease’. The goal of the campaign is to raise awareness of vector-borne disease and to encourage those at risk to protect themselves. Specifically targeted will be families in endemic countries, travellers and residents of countries with emerging vector-borne disease. Key messages are that (1) mosquitoes, flies, ticks, bugs and freshwater snails can spread diseases that cause serious illness and death, (2) diseases such as malaria, dengue, leishmaniasis and yellow fever are preventable, (3) over half of the world’s population is at risk, and (4) personal protection is simple by sleeping under a bednet for example. A webpage is live at [www.who.int/campaigns/world-health-day/2014/en/index.html](http://www.who.int/campaigns/world-health-day/2014/en/index.html). Other materials such as posters and factsheets are being produced with events in Geneva, in-country and in airports. RBM partners can raise awareness of the campaign by sharing the link, printing campaign posters and sharing information through social media.

**Discussion**

Increasingly, a greater proportion of larval habitats will be man-made and it is important for people to be aware of this.

**Draft 2014 Work Plan:**

1. Document procedures in exemplary regulatory bodies and circulate draft for input. In doing so the Work Stream should coordinate with CropLife which is carrying out a similar project.
2. Develop decision making tools for IVM and field test them in select countries.