In 2006, following an international call for tenders, the OIE set up the first vaccine bank to control **avian influenza**, under its World Animal Health and Welfare Fund. The vaccine bank received European Union financial support (PACE programme) and was initially reserved for African countries. During the 2007–2011 period, additional funding from Canada (CIDA), as part of a multi-donor approach, enabled countries from around the world to benefit from the vaccine bank (‘eligible’ countries), with priority given to African and developing countries in line with the solidarity principle. A total of 62,017,000 doses of avian influenza vaccine were delivered to six African countries (mainly Egypt: 45% of vaccines delivered) and to Vietnam (43%). This total included 4,013,000 doses donated by Canada and the United Kingdom through the OIE vaccine bank in the form of combined financial support and in-kind donations. The vast majority of the vaccines were used immediately, although some were supplied in response to requests from OIE Member Countries to build emergency stocks.

In 2011, through the OIE World Animal Health and Welfare Fund and under the European Union-funded HPED programme, the OIE, in collaboration with the Veterinary Services of eligible countries and with technical support from the SEACFMD platform and OIE Reference Laboratories for foot and mouth disease (FMD), launched an international call for tenders for the establishment of an FMD antigen and vaccine bank. Following a selection process involving independent international experts, the OIE negotiated a contract with an internationally renowned vaccine provider to ensure a supply of high-quality vaccines in compliance with OIE international standards. This is a contractual agreement by a selected provider to deliver the specified type and quality of product, service and rates (vaccines, transport cost and transportation service). The contract provides for penalties for missed delivery deadlines.

Under the terms of the tender, the new FMD antigen bank provides five core strains and six optional strains. Member Countries may request additional strains, allowing vaccines containing different antigen combinations to be formulated in line with countries’ requirements and the disease’s changing epidemiology. The vaccine bank also provides a pre-formulated vaccine (four strains) to respond to urgent requests.

The combination of antigen bank (variable vaccine composition), limited physical inventory of pre-formulated vaccines (emergency response) and mechanisms for producing vaccines and replenishing the bank at any time allows several options to be offered in terms of: production and delivery speed; scheduling and cost-reduction (four options); and volume of vaccine in vials (five options). The initial two-year contract has been extended by one year owing to a one-year extension of the European Union-funded HPED programme. Under a multi-donor approach, Australia and New Zealand have provided additional funding for the purchase of FMD vaccines in South-East Asia, providing further leverage. Under this mechanism, the OIE delivered 2.75 million doses of FMD vaccine to five Asian countries until July 2014.

Based on these experiences, in 2012 the OIE, through its World Animal Health and Welfare Fund and as part of a programme funded by the Bill & Melinda Gates Foundation, launched an international call for

---

1 PACE: Pan-African Programme for the Control of Epizootics
2 CIDA: Canadian International Development Agency (now Foreign Affairs, Trade and Development Canada)
3 HPED: Regional cooperation programme on highly pathogenic and emerging and re-emerging diseases in Asia
4 SEACFMD: South-East Asia and China Foot and Mouth Disease Campaign
5 VSPA Project (Vaccine Standards and Pilot Approach to PPR Control in Africa)
Forums

Administered vaccines to be provided to pilot research projects for the oral vaccination of stray dogs. The main vaccine bank (multi-dose vials) was established at a very low initial fixed cost – leverage between the initial fixed cost and total capacity of the new vaccine bank (depending on available funding) – corresponding to the establishment of an initial physical inventory of only 50,000 doses to respond to urgent requests for vaccine to contain an outbreak. This mechanism allows rolling physical inventory and production to be adjusted at any time in response to demand from eligible countries. The initial two-year contracts have been extended by one year owing to a one-year extension of the European Union-funded HPED programme. Under a multi-donor approach, Australia has provided additional financial support for the purchase of rabies vaccines in South-East Asia, providing further leverage.

Eligible countries may, if they wish, pay for the vaccines provided by the OIE. This direct-procurement mechanism serves not only to safeguard the ‘solidarity’ component of the vaccine bank (vaccines and transportation provided free of charge to the poorest countries with financial support from donors) but also exerts a leverage effect in beneficiary countries: supply of vaccines by the OIE with donor support, followed by additional direct procurement from beneficiary countries. This cuts excessive costs for procurement procedures and saves time, while guaranteeing the use of high-quality vaccines in compliance with OIE international standards. Under this mechanism, the OIE delivered 3 million doses of rabies vaccine to ten Asian countries until July 2014 (see also Bulletin, no. 2014-1, pp. 80-81).

Vaccine banks can also provide an opportunity for locally produced, high-quality vaccines to be selected for wider use through a call for tender, and used at a regional/worldwide level, thereby also increasing local vaccine supply and demand.

In 2011, the OIE published a further international call for tenders, as part of the European Union-funded HPED programme, with a view to establishing a vaccine bank to control canine rabies in Asia. In 2012, following a selection process involving independent international experts, the OIE negotiated two contracts – based on a multi-vendor approach and an allotment system – with two internationally renowned vaccine providers to ensure a supply of high-quality vaccines in compliance with OIE international standards. One of the contracts entails the supply of injectable vaccines in multi-dose vials of 10 millilitres (three options in terms of delivery speed), while the other is for the supply of injectable vaccines in single-dose vials of 1 millilitre and allows for orally administered vaccines to be provided to pilot research projects for the oral vaccination of stray dogs. The main vaccine bank (multi-dose vials) was established at a very low initial fixed cost – leverage between the initial fixed cost and total capacity of the new vaccine bank (depending on available funding) – corresponding to the establishment of an initial physical inventory of only 50,000 doses to respond to urgent requests for vaccine to contain an outbreak. This mechanism allows rolling physical inventory and production to be adjusted at any time in response to demand from eligible countries. The initial two-year contracts have been extended by one year owing to a one-year extension of the European Union-funded HPED programme. Under a multi-donor approach, Australia has provided additional financial support for the purchase of rabies vaccines in South-East Asia, providing further leverage.

Eligible countries may, if they wish, pay for the vaccines provided by the OIE. This direct-procurement mechanism serves not only to safeguard the ‘solidarity’ component of the vaccine bank (vaccines and transportation provided free of charge to the poorest countries with financial support from donors) but also exerts a leverage effect in beneficiary countries: supply of vaccines by the OIE with donor support, followed by additional direct procurement from beneficiary countries. This cuts excessive costs for procurement procedures and saves time, while guaranteeing the use of high-quality vaccines in compliance with OIE international standards. Under this mechanism, the OIE delivered 3 million doses of rabies vaccine to ten Asian countries until July 2014 (see also Bulletin, no. 2014-1, pp. 80-81).
Dog vaccination is the single, most cost-effective intervention to protect humans from contracting rabies. High-quality vaccines are available. Vaccine coverage needs to reach at least 70% of the canine population to break the transmission cycle from dogs to humans.

Over all, global/regional vaccine banks can help to guarantee:

a) quality incentives
   - the availability of high-quality vaccines that comply with international standards
   - a reduction in the risks associated with storing large quantities of vaccine in sub-optimal conditions
   - the shelf life of the delivered vaccines.

b) fluid logistics
   - the timely dispatch of emergency stocks in line with field needs
   - the possible delivery of relatively small quantities, in line with field needs, when appropriate
   - complex replenishment mechanisms for the relevant strains (when appropriate); vaccine bank contracts can also include more sophisticated financial mechanisms with clauses for direct purchase and reimbursement by beneficiary countries (emerging or developed countries)
   - easy procurement and delivery systems: bypassing (national) administrative delays, ‘red tape’ and possible costs associated with the multiplication of local registration and vaccine purchases
   - easy customs clearance (international aid)
   - virtual stocks, production on demand
   - the burden of storage lies with the selected vaccine supplier(s), rather than with the purchasing countries
   - in-kind donations (e.g. from laboratories or countries) can also be collected/channelled to support global/regional control programmes.

c) cost incentives
   - a cost reduction per vaccine unit (a call for tender and contracts for large quantities enable a reduced fixed cost)
   - economies of scale
   - the management of multi-donor financial support, allowing for earmarking of funds (eligible countries/activities): low overheads, economies of scale, very low fixed costs
   - synergies and leverage effects.

d) Better coordination
   - harmonisation and coordination of regional control programmes; the implementation of global control strategies
   - support for multi-party vaccination campaigns
   - public/private partnerships
   - country incentives to become engaged.

When high-quality vaccines, complying with international standards, are provided free of charge to developing countries at the airport of destination (the cost of the vaccines and transportation are covered by the vaccine bank), the beneficiary country can concentrate its efforts and limited resources on implementing the vaccination campaign (in-kind contributions and the mobilisation of scarce human, financial and technical resources, such as staff to carry out the vaccination; cold chain transport and storage, if required; vaccination consumables, etc.) or on contracting public–private partnerships with selected NGOs.