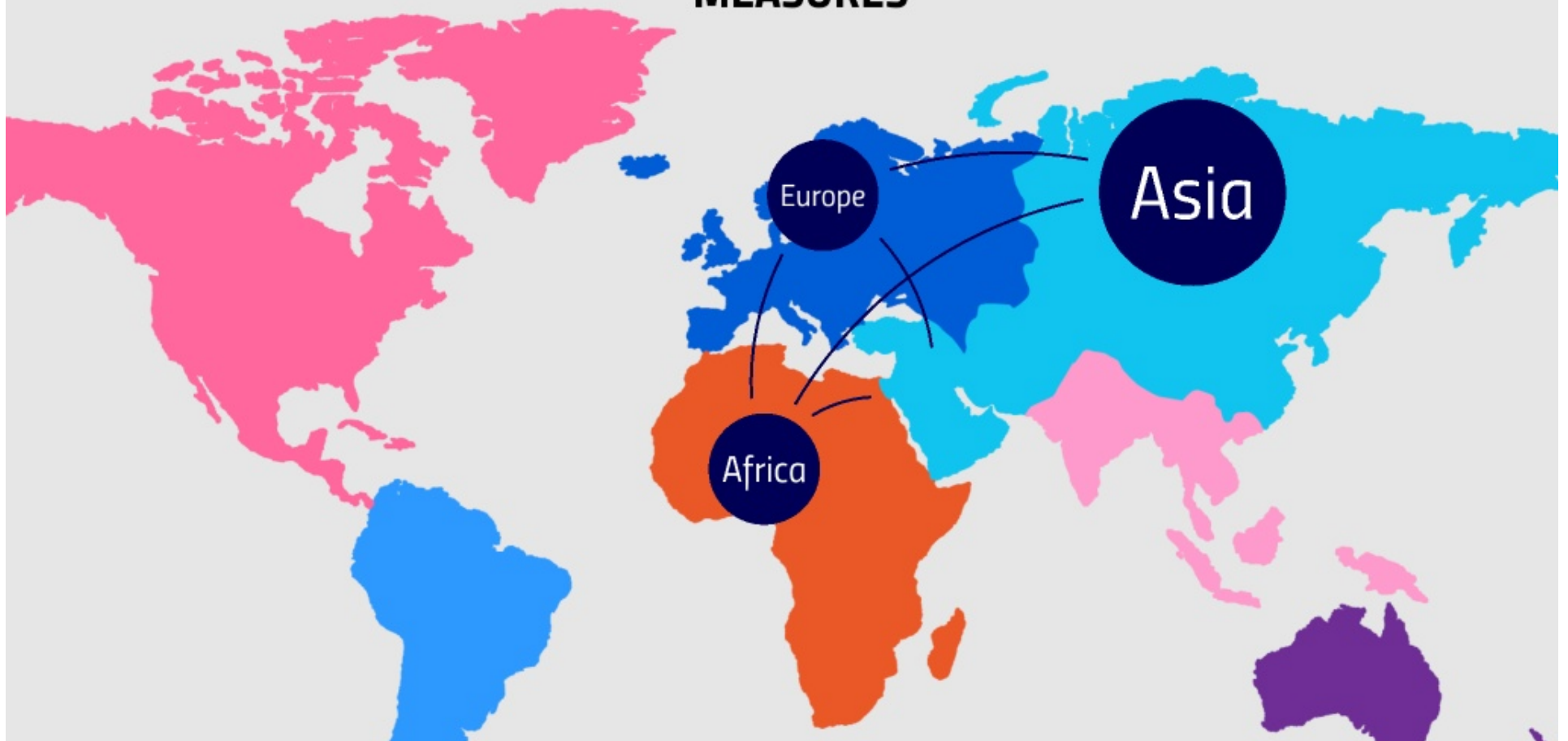


MERCURY MANAGEMENT MEASURES





Europe

Switzerland



2015
Adapt
legislation



2016 **New membrane
based chlorine plant
(CAAB)**



Replacement of the old mercury containing plant by a new membrane technology plant to produce 47 000 tons of chlorine gas per year, which saves 33% electricity. This covers the whole chlorine demand in the Basel area.

*Chemical Risk
Reduction Ordinance
ORRChem.

Process

Decommission of Hg from old plant by BATREC

- 1 Mercury waste
- 2 Safe packaging
- 3 Notification
- 4 Transport (ADR/IMDG)
- 5 Stabilisation**
- 6 Safe packaging into steel drums for permanent disposal
- 7 Transport from BATREC to Switzerland for analysis and transport
- 8 Permanent storage in the salt mine in Herfa Neurode (Germany)



Batrec

The Batrec Process



The stabilisation process and facility developed by Batrec offers an exclusive solution to our customers for their "waste mercury".



Two parallel reactors and a filter-press (capacity of approx. 1000 tonnes/y). The process results in a mercury-sulphide cake with less than 5% water, conversion rate of 99.999% of HgS. Process operational since 2016.



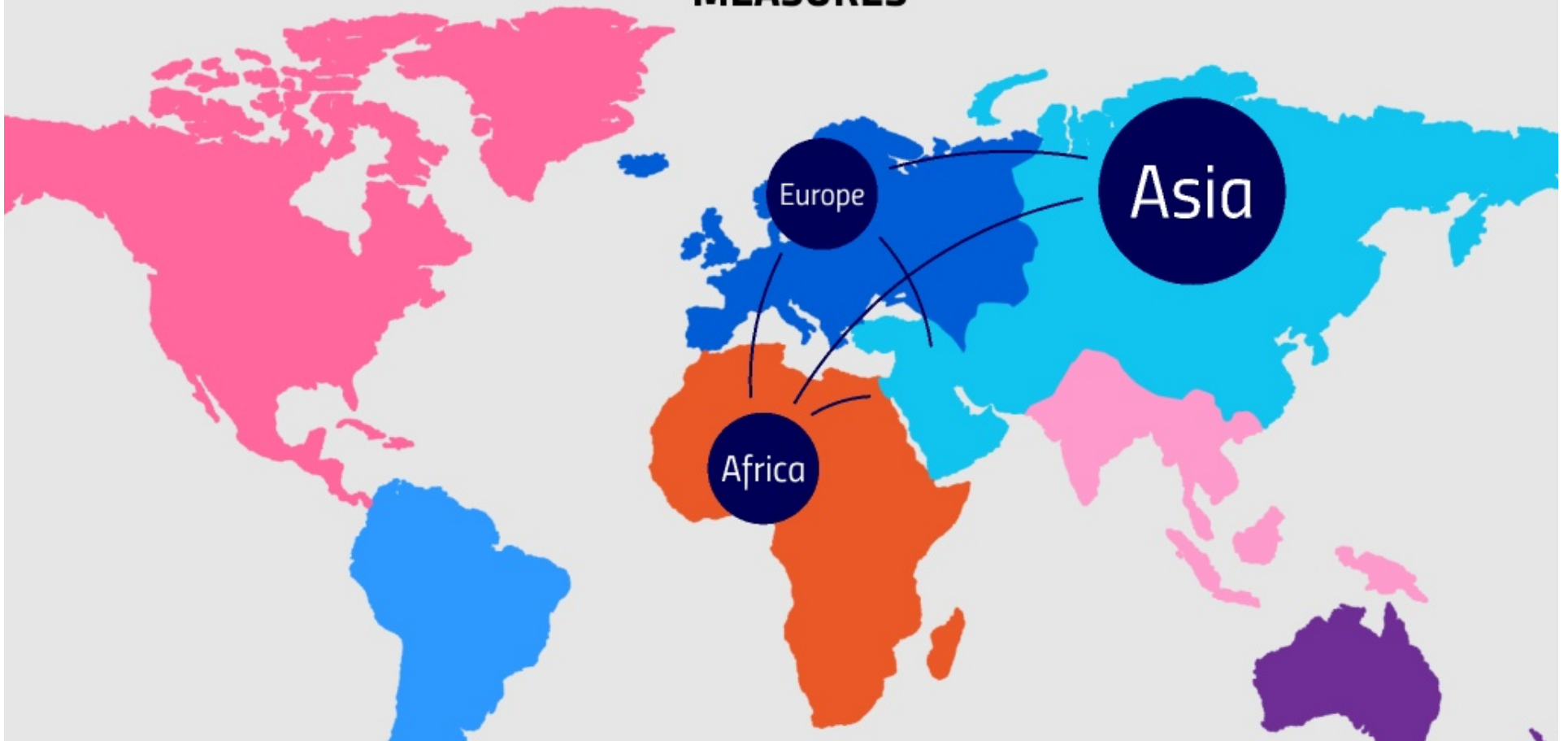
The mercury sulphide is packed in Wimmis in plastic bags which then go into 200 liter drums. Export to Germany, Notification with preconsent according to Basel Convention. The mercury sulphide drums are stored in the salt mine of K+S in Herfa Neurode, Germany.



EUROPE

Dependent on the global cooperation on reduction of anthropogenic mercury releases in order to substantially reduce mercury exposure

MERCURY MANAGEMENT MEASURES





Cameroon

2005 Chief Medical Officer, VicePresident - Dental Order learn about risks of dental amalgam
-2005-2007 phase out

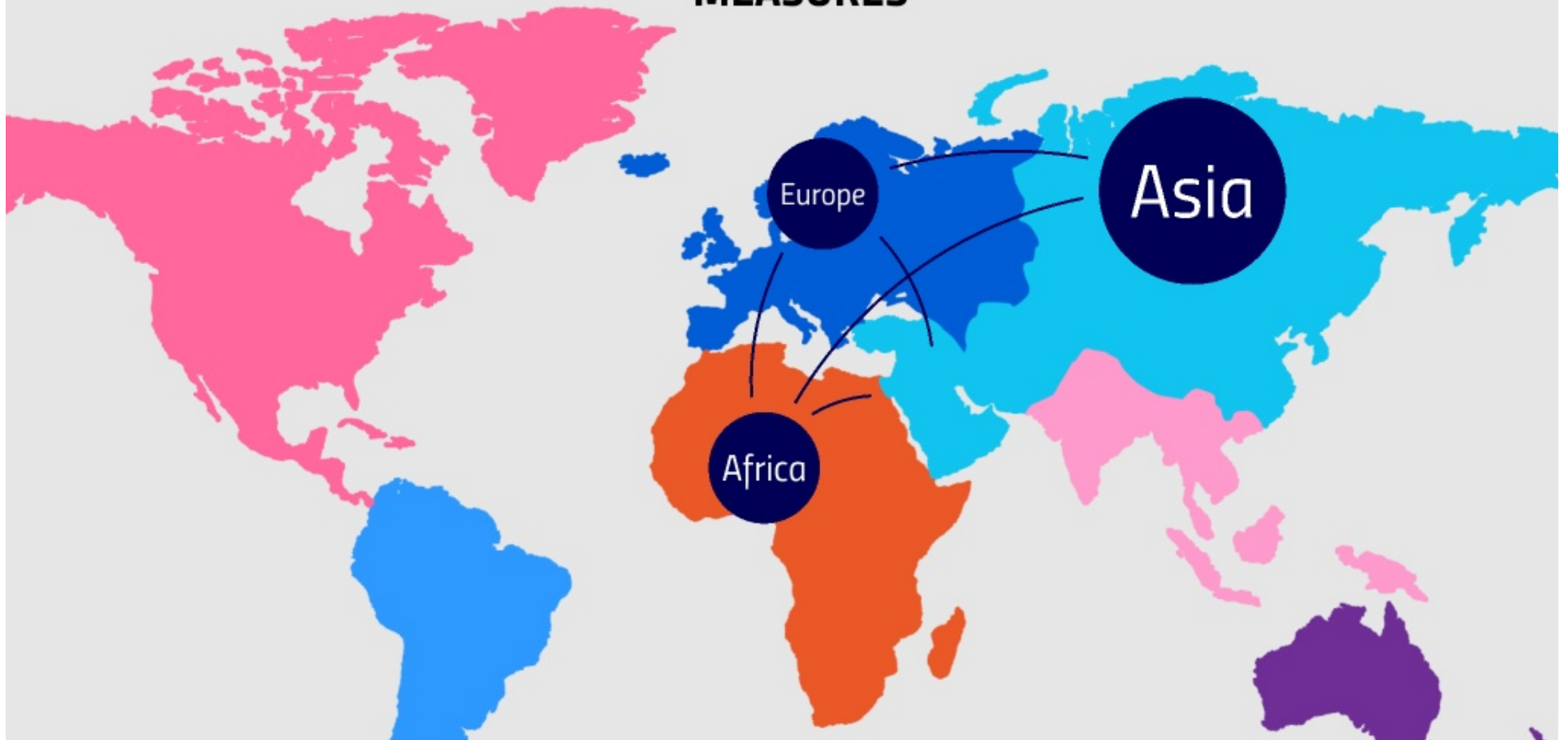
Challenges:

- Lack of experience working with alternatives
- preference for dental amalgam
- cost of alternatives

Measures

- Training to personnel
- Seek governmental support to eliminate tax from alternatives to dental amalgam
- Approval of mandatory curriculum at University on the risks of dental amalgam (including its management), preference for alternatives

MERCURY MANAGEMENT MEASURES





Singapore

From 1 Jan 2020, the manufacture, import and export of non-compliant mercury-added products in Singapore will not be allowed.

Compliance

Manufacturers, importers or distributors have to declare at import/export stage on the compliance. Companies with products that are found to be non-compliant may be subjected to product withdrawal and penalty.

Challenges

Stocks of products non-compliant. What to do?

MERCURY MANAGEMENT MEASURES

