A draft guideline for reporting data on consumption/use of medical substances in veterinary.

Preface.

The Status report on pharmaceuticals in the BS aquatic environment identified multiple knowledge gaps in the information on potential pathways of these substances to the aquatic environment. One of the gaps is the use of pharmaceuticals in veterinary. Only Estonia, Finland and Germany provided some information on sales of medical substances in veterinary. Nonetheless, even these scarce data allowed to assume that the magnitude of the use of medical substances in veterinary is at least not lower than in human medicine.

Pharmaceuticals are designed to reach their specific site of action in human`s or animal´s organism. Therefore they are optimized in terms of stability and mobility and most of them are not easily bio-degradable. Thus, up to 80% of the active ingredients are excreted and may enter into the environment either unchanged or as metabolites (F. Balzer, S. Zühlke and S. Hannappel, 2016).

Veterinary pharmaceuticals used in treating farm animals are mostly released into the environment by spreading of manure and the application of organic fertilizers. After percolation through the soil and unsaturated zone, they may reach shallow groundwater. Additionally, they may reach adjacent surface water bodies via runoff or drainage from fertilized farmlands. Taking into account the magnitude of animal farming in the Baltic Sea region this might be one of the significant pathways of pharmaceutical substances into the aquatic environment.

The data on the consumption/use of pharmaceuticals in veterinary will allow to identify a magnitude of potential contamination of the environment by medical substances via this pathway. It will also allow to identify priority substances which might be found in the environment.

Data on the use of pharmaceutical substances.

The statistical data regarding sales of pharmaceuticals in the most of the Baltic Sea countries are available for the period since 2010. In accordance with the national legal framework in most of the countries all the wholesalers are reporting the data on sold medicines to the competent authorities. The reported data in general contain information on medicinal product identification code, trade name, price per package, number of packages sold and consumer group to which the product was sold. These data are used for calculating annual statistics of pharmaceuticals consumption.

Germany and Russia are exemptions from the common practices in the Baltic Sea region due to their territories extending far beyond the Baltic Sea catchment area and federal state structure. The only few regions of these federations are located within the Baltic Sea drainage area. The statistics on medical products consumption is mainly compiled at the federal level in both countries and hardly available at the regional one. In this cases the assessment can be made using data on federal statistics together with livestock data on the particular regions which are located in the Baltic Sea catchment.

The following data on sales of pharmaceuticals is to be reported for the period 2012-2017:

1. Data to be reported per active pharmaceutical ingredient, as divided on the 5th level of ATCvet-classification (in case the data on 5th level is unavailable, the lower classification might be reported).
    a. Annual sales (kg/year)
    b. For which animals is the substance being used?
        i. If several, estimation of the division between different species (i.e. "bovine: 80 %; dogs: 20 %")
2. Buyer of the veterinary medicine (percent):

        i. veterinary doctors or agricultural companies represented by veterinary doctor;
       ii. veterinary pharmacies;
     iii. general pharmacies;
    iv. other institutions

3. National practices concerning the collection & treatment of unused veterinary medicines
   a. How are unused veterinary medicines instructed to be disposed of by
      i. Households
      ii. Farms
      iii. Veterinarians
      iv. Veterinary hospitals
   b. How are unused veterinary medicines disposed of by
      i. Households
      ii. Farms
      iii. Veterinarians
      iv. Veterinary hospitals