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Global Food Safety Portal: A visualisation tool to promote new research into data relations and assess trends, patterns and risk factors for foodborne pathogens

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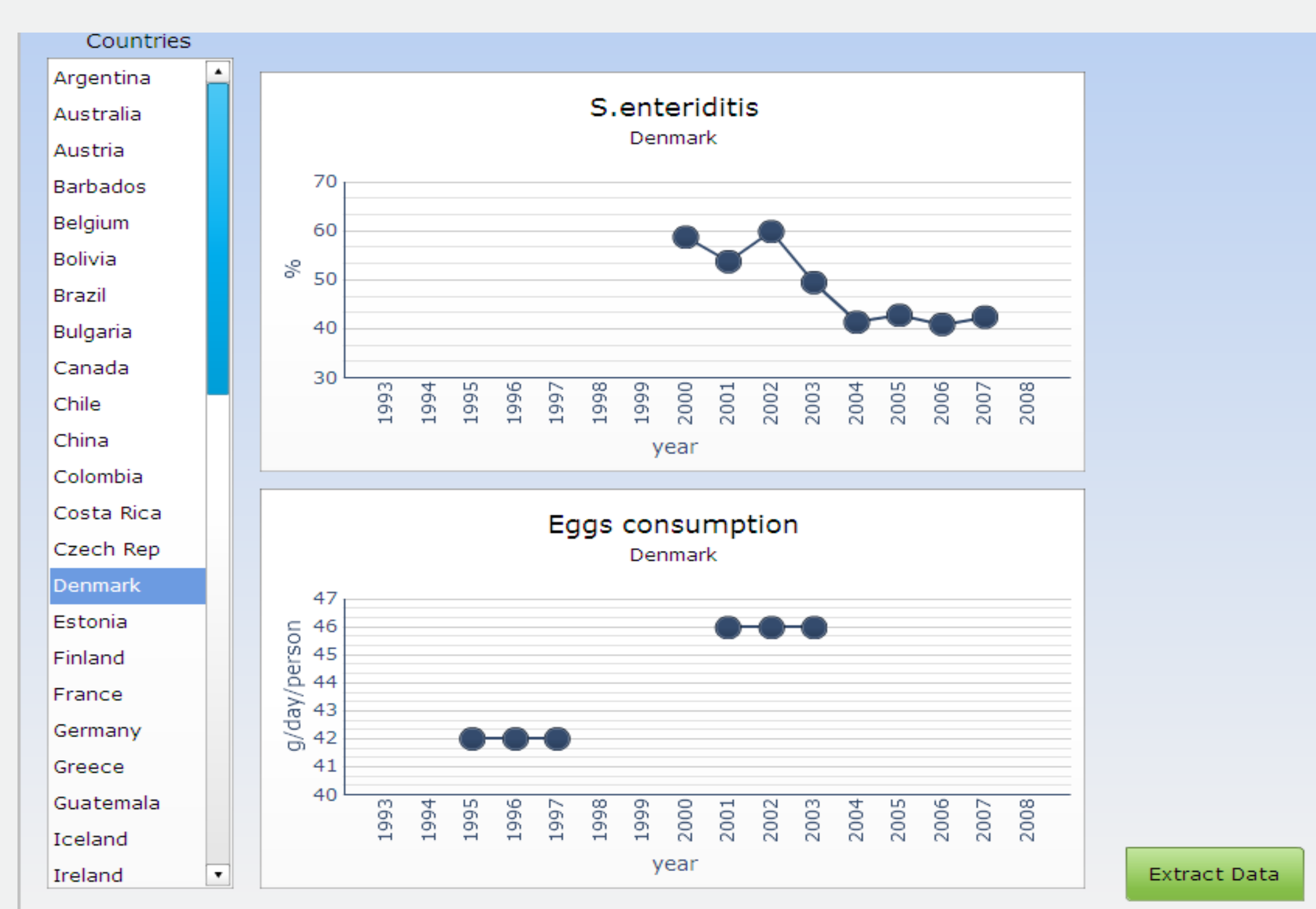
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Background:

Foodborne diseases represent a major toll in terms of public health. With the recent trends in global food production, processing, distribution and preparation, there is a need for a better integration and public availability of the data collected and reported by monitoring programs in the food safety area. The objective of this web-based Portal is to integrate and display data from veterinary, food and public health monitoring programs from different countries with other possible relevant types of data (e.g. food consumption, production, or climate) to assess trends as well as to investigate associations, patterns and risk factors, through a user-friendly web interface.



Methods:

A multi-relational database was constructed and, as a starting point, already publically available veterinary, food and human health data was included. The database will be updated with new categories of data as well with more recent data in the already existing explanatory categories. The portal is connected to other existing databases receiving automatic updates. An example is the WHO Global Food Network Country Databank (CDB), which collects data on *Salmonella* serovar distributions from 84 countries. All data in the portal can be visualised through an interface that allows the users to perform intuitive queries.

Note : All images in this poster are screen shots from the pilot version of the Global Food Safety Portal

Results:

Using some of the data in the portal (*Salmonella* prevalence, food consumption and production and general health statistics data), the user can query the data by serovar, country, region or product, having access to data from different years displayed through plots, charts and maps, and then compare, e.g. the evolution of different *Salmonella* serotypes prevalences in a country with the consumption patterns of certain food types in the same time period, but also look into demographic data that can be useful for interpreting the situation.

Conclusion:

The possibility of combining different types of existing data can bring new insights into data relationships. The Food Safety Portal has the potential to become a reference tool in the food safety and foodborne disease surveillance field. The collaboration with WHO GFN assures the global perspective of the portal, which will be re-enforced with the gradual addition of new data on pathogens and their sources.