
Title	PardNor - PARAmeters for ingestion Dose models for NORdic areas
Author(s)	Sven P. Nielsen and Kasper G. Andersson
Affiliation(s)	Risø National Laboratory for Sustainable Energy, Technical University of Denmark, 4000 Roskilde, Denmark
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Abstract	<p>A review of the foodchain ECOSYS model, which is applied in the European standard decision support systems ARGOS and RODOS, has identified a number of points where elaboration is deemed necessary before ECOSYS should be relied on for Nordic decision making. The present study has been performed to update the ECOSYS model, which in a number of ways does not reflect current state-of-the-art knowledge, and to obtain country-specific data. It is the aim of the PardNor project to collect new data, and thus enable the targeted use of ECOSYS for scenarios involving contamination of specific Nordic areas. The effort in 2007 is targeted on identifying location-specific Nordic data sets describing the typical human diets, fractions of imported food items and animal feeding regimes. For each of the Nordic countries, a dataset has been established describing the typical diets for four different age groups, ranging from young children to senior adults. A comparison of the datasets shows that there are significant differences between consumption rates of some of the important food items. For instance, the average consumption of milk varies by a factor of 4-5 among the Nordic countries, and consumption of leafy vegetables varies by a factor of almost 4. Due to the differences in climate among the Nordic countries and also compared to Southern Germany, for which the default ECOSYS values apply, there are also very significant differences in the production regimes of some food items. Since some countries import practically the entire consumption of some major food items, it is important to generally examine the import patterns for the different Nordic countries. Due to the complexity of current international trade routes, unexpectedly high import fractions were found for some food items, for which the production in the given countries was much more than sufficient to cover the home market. ECOSYS calculations for a scenario showed that the differences in consumption and production patterns could easily lead to a difference in long term ingestion doses by a factor of at least two between the Nordic countries. It was also demonstrated that early phase doses received before countermeasures can be effectively implemented may deviate by at least an order of magnitude. Finally, typical animal feeding regimes have been examined and described for the different Nordic countries. Here it has been found that both the fodder items and the seasonal variation in their application vary considerably.</p>
Key words	Foodchain modelling, ingestion dose
