README

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Dataset title:

Food consumption and dietary environmental indicators in Swedish adolescents (Riksmaten ungdom 2016-17)

Creators:

Lindroos AK, Winkvist A, Röös E, Hallström E.

Responsible organization:

Uppsala University

See the Researchdata.se catalogue entry for this dataset for complete metadata, including the dataset description, recommended citation, contact information and information about how to obtain the dataset.

Description: The datasets include energy intake and estimated environmental impacts for eight indicators (carbon footprint, land use, blue water, nitrogen input, phosphorus input, biodiversity, pesticide use, and ammonia emissions) for foods and estimated per participant in the Riksmaten adolescent survey (Riksmaten ungdom 2016-17). Total intake/estimated environmental impact are estimated per day and per year and broken down by food groups. Background factors such as sex, grade (5th grade, 8th grade, and 11th grade), and parents' education level are also included. The code list for the id-numbers is deleted and it is not possible to link the information to any individuals.

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Access restrictions: This dataset can be requested from the Researchdata.se research data catalog. Additional data from the Riksmaten adolescent survey can be requested from the Swedish Food Agency.

Essential information for dataset reuse

The Riksmaten adolescent survey is a nationally representative, school-based, cross-sectional survey of pupils in grades 5 (aged 11-12 years), grade 8 (aged 14-15 years), and grade 2 high school (aged 17-18 years). The survey was conducted by the Swedish Food Agency in the school year 2016 and 2017 by the Swedish Food Agency. Diet was collected with a web-based 24-hour recall method on two non-consecutive days. For more information on the methodology of the survey and the estimation of environmental indicators, see references.

Dataset organization

The data is divided into three datasets.

"RMUldb_indicators_2025.csv"

This dataset contains the foods (n=775) reported in the Riksmaten adolescent survey (Riksmaten ungdom 2016-17) with energy and environmental indicators expressed per 1000 grams of food. Food group codes are also included in the dataset.

"RMUindicatorstot_2025.csv"

This dataset includes energy intake and estimated environmental impacts for eight indicators (carbon footprint, land use, blue water, nitrogen input, phosphorus input, biodiversity, pesticide use, and ammonia emissions) at the individual level (n=3099 participants). Total intake/estimated environmental impact per day, per year and per MJ are included in the dataset. Background factors such as gender, grade (5th grade, 8th grade, and grade 2 in high school), and parents' education level are also included.

Energy intake and the environmental indicators are estimated based on reported intake in the Riksmaten adolescent survey and the values given per food in RMUldb_2025.csv

"RMUindicators_foodgr_2025.csv"

This dataset includes energy intake and estimated environmental impacts for eight indicators (carbon footprint, land use, blue water, nitrogen input, phosphorus input, biodiversity, pesticide use, and ammonia emissions) at the individual level (n=3099 participants). The variables include intake and estimations per food group for day 1, day 2 and the average between the two days. Food group intake and estimations are also calculated per year and aggregated values for animal-based foods, plant-based foods and discretionary foods. The foods included in the respective food groups are described in the dataset "RMUldb_indicators_2025.csv". In addition, background variables and quartiles of the yearly energy intake and impacts are included in the dataset.

Reference information

The dataset includes information on dietary intake (amounts and energy intake) from the Riksmaten adolescent 2016-17 survey and environmental data available at www.SAFAD.se. The datasets were prepared and used for this study and more information about the variables are included here:

Lindroos, A.K., Winkvist, A., Röös, E., Hallström, E. The environmental impact of Swedish adolescents' diets. Environmental Research: Food systems. DOI **10.1088/2976-601X/adde63**

The following references also include important information about the methodology and the variables and should always be cited if data are used:

Moraeus, L., Lemming, E.W., Hursti, U.-K.K., Arnemo, M., Sipinen, J.P., Lindroos, A.K., 2018. Riksmaten Adolescents 2016-17: A national dietary survey in Sweden - design, methods, and participation. Food Nutr. Res. 62. https://doi.org/ 10.29219/fnr.v62.1381

Lindroos, A.K., Petrelius Sipinen, J., Axelsson, C., Nyberg, G., Landberg, R., Leanderson, P., Arnemo, M., Warensjö Lemming, E., 2019. Use of a Web-Based Dietary Assessment Tool (RiksmatenFlex) in Swedish Adolescents: Comparison and Validation Study. J. Med. Internet Res. 21, e12572. https://doi.org/ 10.2196/12572

Röös, E., Jacobsen, M., Karlsson, L., Wanecek, W., Spångberg, J., Mazec, R., Rydhmer, L., 2025. Introducing a Comprehensive and Configurable Tool for Calculating Environmental and Social Footprints for use in Dietary Assessments. Submitted manuscript.

Additional methodological references

MSM-adjustment

Harttig, U., Haubrock, J., Knüppel, S., Boeing, H., 2011. The MSM program: web-based statistics package for estimating usual dietary intake using the Multiple Source Method. Eur J Clin Nutr 65 Suppl 1, S87-91. https://doi.org/ 10.1038/ejcn.2011.92

Haubrock, J., Nöthlings, U., Volatier, J.L., Dekkers, A., Ocké, M., Harttig, U., Illner, A.K., Knüppel, S., Andersen, L.F., Boeing, H., 2011. Estimating usual food intake distributions by using the multiple source method in the EPIC-Potsdam Calibration Study. J Nutr 141, 914-920. https://doi.org/ 10.3945/jn.109.120394

Categorization of overweight obesity according IOTF

Cole, T.J., Lobstein, T., 2012. Extended international (IOTF) body mass index cut-offs for thinness, overweight and obesity. Pediatr Obes 7, 284-294. https://doi.org/ 10.1111/j.2047-6310.2012.00064.x

Data sources:

The dataset includes aggregated data. Background information and reported food consumption from the Riksmaten adolescent survey is freely available upon request from the Swedish Food Agency. Additional data from the Riksmaten Adolescent study can also be requested from the Swedish Food Agency. FoodEx2 codes were used to match reported foods in the survey with the environmental data for foods. The environmental data is available at www.SAFAD.se

Data Quality:

The data has been cleaned from large errors. Reported energy intake is not misreported on average but individual misreporting may still be present. This has to be considered when analysing data. It is also important to note many uncertainties exist in the underlying data for the environmental indicators.

Datafile descriptions

Variable description

Dataset "RMUldb_indicators_2025.csv"

Energy and environmental indicators expressed per 1000 grams of food, n=775 foods.

16 columns x 775 observations

Variables	**Label**
Livsmedelsnummer	Unique food id
Livsmedel	Food item in Swedish
Food item	Food item in English
Foodgr_id	Food group id
Livsmedelsgrupp	Food group name in Swedish
Foodgroup	Food group name in English
carbonfp_tot	carbon footprint, kg CO_2 equivalents (CO2e).
Croplandm2yearkg	Land use, m^2*year,
NewNinputkgNkg	N input, kg
NewPinputkgPkg	P input, kg
Waterm3kg	Blue water, m^3
Pesticidesgaikg	Pesticides use, gram active ingredient (g a.i.)
AmmoniakgNH3kg	Ammonia emission, kg
Biodiversity	Biodiversity impact land, E/MSY
SLV_lgrupp	Original food groups used in the Riksmaten adolescent survey
SLVgruppid	Code for the original food groups used in the Riksmaten adolescent survey

Dataset "RMUindicatorstot_2025.csv

This dataset contains background variables, food intake, energy intake and environmental indicators per day (average of two 24h-recall days), MSM-adjusted values per day/per year/per MJ in Riksmaten ungdom (the Riksmaten adolescent study) for each individual, n=3099 observations.

68 columns x 3099 observations

Variables	**Label**
Id	The unique code for each participant.
age	year

weight	kg
height	meter
BMI	kg/m^2
bmi_status_IOTF	Under weight (UW); Normal weight (NW); Over weight (OW); Obese (OB) according IOTF definition
overweight	UW/NW or OW/OB
obesity	No=0; Yes=1
education_household	<=12; >12 years (at least one parent > 12 years of education)
school_unit	a unique number for each school unit
school_grade	1=school grade 5; 2=school grade 8; 3=school grade 2 gymnasium
Sex	Male; Female
Sweden_born	Born in Sweden; Not born in Sweden
foodwt_all_m	Food weight, kg per day
foodwt_all_usual	Food weight, kg per day. MSM-adjusted.
enerkj_all_m	Energy intake, kJ per day
enerkj_all_usual	Energy intake, kJ per day. MSM-adjusted.
enerkcal_all_usual	Energy intake, kcal per day. MSM-adjusted.
carbonfp_all_m	Carbon footprints, kg CO2 equivalents per day
carbonfp_all_usual	Carbon footprints, kg CO2 per day. MSM-adjusted.
landuse_all_m	Landuse, m^2 * year, per day
landuse_all_usual	Landuse, m^2 * year per day MSM-adjusted.
ninput_all_m	New Nitrogen input, kg per day
ninput_all_usual	New Nitrogen input, kg per day. MSM-adjusted.
pinput_all_m	New Phosphorous input, kg per day
pinput_all_usual	New Phosphorous input, kg per day. MSM-adjusted.
bluewater_all_m	Blue water, m^3 per day
bluewater_all_usual	Blue water, m^3 per day. MSM-adjusted.
pesticide_all_m	Pesticides, gram active ingredient (g a.i.) per day
pesticide_all_usual	Pesticides, g a.i. per day. MSM-adjusted.
biod_all_m	Biodiversity Extinctions per million species-years (E/MSY) per day
biod_all_usual	Biodiversity E/MSY per day. MSM-adjusted.

ammoniae_all_m	Ammonia emissions, kg per day
ammoniae_all_usual	Ammonia emissions, kg per day. MSM-adjusted.
carbonfp10MJ	Carbon footprints, kg CO2 equivalents per 10 MJ. MSM-adjusted.
landuse10MJ	Land use, m^2 per 10 MJ. MSM-adjusted.
bluewater10MJ	Blue water, m^3 per 10 MJ MSM-adjusted.
ninput10MJ	New Nitrogen input, kg per 10 MJ. MSM-adjusted.
pinput10MJ	New Phosphorous input, kg per 10 MJ. MSM-adjusted.
biodiv10MJ	Biodiversity, E/MSY per 10 MJ. MSM-adjusted.
pesticide10MJ	Pesticides, g a.i. per 10 MJ. MSM-adjusted.
ammoniae10MJ	Ammonia emissions, kg per 10 MJ. MSM-adjusted.
carbonfp1000kcal	Carbon footprints, kg CO2 equivalents per 1000 kcal. SM-adjusted.
landuse1000kcal	Land use, m^2 per 1000 kcal. Based on MSM-adjusted values.
bluewater1000kcal	Blue water, m^3 per 1000 kcal. Based on MSM-adjusted values.
ninput1000kcal	New Nitrogen input, kg per 1000 kcal. Based on MSM-adjusted values.
pinput1000kcal	New Phosphorous input, kg per 1000 kcal. Based on MSM-adjusted values.
biodiv1000kcal	Biodiversity, E/MSY per 1000 kcal. Based on MSM-adjusted values.
pesticide1000kcal	Pesticides, g a.i. per 1000 kcal. Based on MSM-adjusted values.
ammoniae1000kcal	Ammonia emissions, kg per 1000 kcal. Based on MSM-adjusted values.
carbonfp_year	Carbon footprints, kg CO2 equivalents per year. MSM-adjusted.
landuse_year	Land use, m^2 per year. MSM-adjusted.
bluewater_year	Blue water, m^3 per year. MSM-adjusted.
ninput_year	New Nitrogen input, kg per year. MSM-adjusted.
pinput_year	New Phosphorous input, kg per year. MSM-adjusted.
biod_year	Biodiversity, E/MSY per year. MSM-adjusted.
pesticide_year	Pesticides, g a.i. per year. MSM-adjusted.
ammonia_year	Ammonia emissions, g a.i. per year. MSM-adjusted.
kJ_year	Energy intake, kJ per year. MSM-adjusted.
Kg_year	Food weight, kg per year. MSM-adjusted.
carbonfp_Q	Carbon footprints by quartile (Q1–Q4), MSM-adjusted.
landuse_Q	Land use by quartile (Q1–Q4), MSM-adjusted.
ninput_Q	New Nitrogen input by quartile (Q1-Q4), MSM-adjusted.

pinput_Q	New Phosphorous input by quartile (Q1-Q4), MSM-adjusted.
bluewater_Q	Blue water by quartile (Q1-Q4), MSM-adjusted.
pesticides_Q	Pesticides by quartile (Q1-Q4), MSM-adjusted.
biod_Q	Biodiversity by quartile (Q1-Q4), MSM-adjusted.
ammoniae_Q	Ammonia emissions by quartile (Q1-Q4), MSM-adjusted.

3. Dataset "RMUindicators_foodgr_2025.csv"

This dataset contains background variables, food and energy intake, and environmental indicators per food group for day 1 and day 2 as well as average values of the two days, per day and per year. The yearly values are also aggregated as animal-based food, plant-based foods and discretionary foods. The foods included in the respective food groups are displayed in the dataset "RMUldb_indicators_2025.csv". In addition, background variables and quartiles of the yearly energy intake and impacts are included in the dataset, n=3099 observations.

1334 columns x 3099 observations

Variables	**Description**
Id	
Foodwt11-kJ2111	*Description and units are displayed in Foodwt11-Ammoniae11*
Foodwt11	Amounts, grams, Vegetables incl. dishes, day 1
Carbonfp11	Carbon footprint, kg CO2e
Landuse11	Land use, m^2*year,
Ninput11	N input, kg
Pinput11	P input, kg
Bluewater11	Blue water, m^3
Pesticide11	Pesticides use, gram active ingredient (g a.i.)
Biod11	Biodiversity impact, E/MSY
Ammoniae11	Ammonia emission, kg
kJ11	Energy intake, kJ
Foodwt12	Fruit, day 1
Carbonfp12	
Landuse12	
Ninput12	
Pinput12	
Bluewater12	

Pesticide12	
Biod12	
Ammoniae12	
kJ12	
Foodwt14	Milk, yoghurts, cream, day
Carbonfp14	
Landuse14	
Ninput14	
Pinput14	
Bluewater14	
Pesticide14	
Biod14	
Ammoniae14	
kJ14	
Foodwt15	Cheese, day 1
Carbonfp15	
Landuse15	
Ninput15	
Pinput15	
Bluewater15	
Pesticide15	
Biod15	
Ammoniae15	
kJ15	
Foodwt16	Butter, day 1
Carbonfp16	
Landuse16	
Ninput16	
Pinput16	
Bluewater16	
Pesticide16	

Biod16	
Ammoniae16	
kJ16	
Foodwt18	Poultry, eggs, day 1
Carbonfp18	
Landuse18	
Ninput18	
Pinput18	
Bluewater18	
Pesticide18	
Biod18	
Ammoniae18	
kJ18	
Foodwt110	Fish, seafood, day 1
Carbonfp110	
Landuse110	
Ninput110	
Pinput110	
Bluewater110	
Pesticide110	
Biod110	
Ammoniae110	
kJ110	
Foodwt113	Vegetable products, day 1
Carbonfp113	
Landuse113	
Ninput113	
Pinput113	
Bluewater113	
Pesticide113	
Biod113	

Ammoniae113	
kJ113	
Foodwt114	Salty snacks, day 1
Carbonfp114	
Landuse114	
Ninput114	
Pinput114	
Bluewater114	
Pesticide114	
Biod114	
Ammoniae114	
kJ114	
Foodwt115	Sweets, day 1
Carbonfp115	
Landuse115	
Ninput115	
Pinput115	
Bluewater115	
Pesticide115	
Biod115	
Ammoniae115	
kJ115	
Foodwt116	Nuts, seeds, day 1
Carbonfp116	
Landuse116	
Ninput116	
Pinput116	
Bluewater116	
Pesticide116	
Biod116	
Ammoniae116	

kJ116	
Foodwt117	Soft drinks, juices, day 1
Carbonfp117	
Landuse117	
Ninput117	
Pinput117	
Bluewater117	
Pesticide117	
Biod117	
Ammoniae117	
kJ117	
Foodwt118	Alcohol, day 1
Carbonfp118	
Landuse118	
Ninput118	
Pinput118	
Bluewater118	
Pesticide118	
Biod118	
Ammoniae118	
kJ118	
Foodwt119	Desserts, ice-cream, day 1
Carbonfp119	
Landuse119	
Ninput119	
Pinput119	
Bluewater119	
Pesticide119	
Biod119	
Ammoniae119	
kJ119	

Foodwt120	Sugars, syrups, jam, honey, day 1
Carbonfp120	
Landuse120	
Ninput120	
Pinput120	
Bluewater120	
Pesticide120	
Biod120	
Ammoniae120	
kJ120	
Foodwt121	Sweet Bread, cakes and cookies, day 1
Carbonfp121	
Landuse121	
Ninput121	
Pinput121	
Bluewater121	
Pesticide121	
Biod121	
Ammoniae121	
kJ121	
Foodwt122	Poultry, eggs, day 1
Carbonfp122	
Landuse122	
Ninput122	
Pinput122	
Bluewater122	
Pesticide122	
Biod122	
Ammoniae122	
kJ122	
Foodwt123	Sauces, dressings, spices, day 1

Carbonfp123	
Landuse123	
Ninput123	
Pinput123	
Bluewater123	
Pesticide123	
Biod123	
Ammoniae123	
kJ123	
Foodwt124	Water, day 1
Carbonfp124	
Landuse124	
Ninput124	
Pinput124	
Bluewater124	
Pesticide124	
Biod124	
Ammoniae124	
kJ124	
Foodwt125	Vegetable fats, day 1
Carbonfp125	
Landuse125	
Ninput125	
Pinput125	
Bluewater125	
Pesticide125	
Biod125	
Ammoniae125	
kJ125	
Foodwt126	Protein powders/bars, day 1
Carbonfp126	

Landuse126	
Ninput126	
Pinput126	
Bluewater126	
Pesticide126	
Biod126	
Ammoniae126	
kJ126	
Foodwt131	Bread, day 1
Carbonfp131	
Landuse131	
Ninput131	
Pinput131	
Bluewater131	
Pesticide131	
Biod131	
Ammoniae131	
kJ131	
Foodwt132	Breakfast cereals, day 1
Carbonfp132	
Landuse132	
Ninput132	
Pinput132	
Bluewater132	
Pesticide132	
Biod132	
Ammoniae132	
kJ132	
Foodwt133	Pasta, day 1
Carbonfp133	
Landuse133	

Ninput133	
Pinput133	
Bluewater133	
Pesticide133	
Biod133	
Ammoniae133	
kJ133	
Foodwt134	Rice and noodles, day 1
Carbonfp134	
Landuse134	
Ninput134	
Pinput134	
Bluewater134	
Pesticide134	
Biod134	
Ammoniae134	
kJ134	
Foodwt135	Cereal-based dishes, day 1
Carbonfp135	
Landuse135	
Ninput135	
Pinput135	
Bluewater135	
Pesticide135	
Biod135	
Ammoniae135	
kJ135	
Foodwt171	Red meat, day 1
Carbonfp171	
Landuse171	
Ninput171	

Pinput171	
Bluewater171	
Pesticide171	
Biod171	
Ammoniae171	
kJ171	
Foodwt172	Meat dishes, day 1
Carbonfp172	
Landuse172	
Ninput172	
Pinput172	
Bluewater172	
Pesticide172	
Biod172	
Ammoniae172	
kJ172	
Foodwt173	Processed meat, day 1
Carbonfp173	
Landuse173	
Ninput173	
Pinput173	
Bluewater173	
Pesticide173	
Biod173	
Ammoniae173	
kJ173	
Foodwt1111	Potatoes, day 1
Carbonfp1111	
Landuse1111	
Ninput1111	
Pinput1111	

Bluewater1111	
Pesticide1111	
Biod1111	
Ammoniae1111	
kJ1111	
Foodwt21	Vegetables incl. Dishes, day 2
Carbonfp21	
Landuse21	
Ninput21	
Pinput21	
Bluewater21	
Pesticide21	
Biod21	
Ammoniae21	
kJ21	
Foodwt22	Fruit, day 2
Carbonfp22	
Landuse22	
Ninput22	
Pinput22	
Bluewater22	
Pesticide22	
Biod22	
Ammoniae22	
kJ22	
Foodwt24	Milk, yoghurts, cream, day 2
Carbonfp24	
Landuse24	
Ninput24	
Pinput24	
Bluewater24	

Pesticide24	
Biod24	
Ammoniae24	
kJ24	
Foodwt25	Cheese, day 2
Carbonfp25	
Landuse25	
Ninput25	
Pinput25	
Bluewater25	
Pesticide25	
Biod25	
Ammoniae25	
kJ25	
Foodwt26	Butter, day 2
Carbonfp26	
Landuse26	
Ninput26	
Pinput26	
Bluewater26	
Pesticide26	
Biod26	
Ammoniae26	
kJ26	
Foodwt28	Poultry, eggs, day 2
Carbonfp28	
Landuse28	
Ninput28	
Pinput28	
Bluewater28	
Pesticide28	

Biod28	
Ammoniae28	
kJ28	
Foodwt210	Fish, seafood, day 2
Carbonfp210	
Landuse210	
Ninput210	
Pinput210	
Bluewater210	
Pesticide210	
Biod210	
Ammoniae210	
kJ210	
Foodwt213	Vegetable products, day 2
Carbonfp213	
Landuse213	
Ninput213	
Pinput213	
Bluewater213	
Pesticide213	
Biod213	
Ammoniae213	
kJ213	
Foodwt214	Salty snacks, day 2
Carbonfp214	
Landuse214	
Ninput214	
Pinput214	
Bluewater214	
Pesticide214	
Biod214	

Ammoniae214	
kJ214	
Foodwt215	Sweets, day 2
Carbonfp215	
Landuse215	
Ninput215	
Pinput215	
Bluewater215	
Pesticide215	
Biod215	
Ammoniae215	
kJ215	
Foodwt216	Nuts, seeds, day 2
Carbonfp216	
Landuse216	
Ninput216	
Pinput216	
Bluewater216	
Pesticide216	
Biod216	
Ammoniae216	
kJ216	
Foodwt217	Soft drinks, juices, day 2
Carbonfp217	
Landuse217	
Ninput217	
Pinput217	
Bluewater217	
Pesticide217	
Biod217	
Ammoniae217	

kJ217	
Foodwt218	Alcohol, day 2
Carbonfp218	
Landuse218	
Ninput218	
Pinput218	
Bluewater218	
Pesticide218	
Biod218	
Ammoniae218	
kJ218	
Foodwt219	Desserts ice-cream, day 2
Carbonfp219	
Landuse219	
Ninput219	
Pinput219	
Bluewater219	
Pesticide219	
Biod219	
Ammoniae219	
kJ219	
Foodwt220	Sugars, syrups, jam, honey, day 2
Carbonfp220	
Landuse220	
Ninput220	
Pinput220	
Bluewater220	
Pesticide220	
Biod220	
Ammoniae220	
kJ220	

Foodwt221	Sweet Bread, cakes and cookies, day 2
Carbonfp221	
Landuse221	
Ninput221	
Pinput221	
Bluewater221	
Pesticide221	
Biod221	
Ammoniae221	
kJ221	
Foodwt222	Poultry, eggs, day 2
Carbonfp222	
Landuse222	
Ninput222	
Pinput222	
Bluewater222	
Pesticide222	
Biod222	
Ammoniae222	
kJ222	
Foodwt223	Sauces, dressings, spices, day 2
Carbonfp223	
Landuse223	
Ninput223	
Pinput223	
Bluewater223	
Pesticide223	
Biod223	
Ammoniae223	
kJ223	
Foodwt224	Water, day 2

Carbonfp224	
Landuse224	
Ninput224	
Pinput224	
Bluewater224	
Pesticide224	
Biod224	
Ammoniae224	
kJ224	
Foodwt225	Vegetable fats, day 2
Carbonfp225	
Landuse225	
Ninput225	
Pinput225	
Bluewater225	
Pesticide225	
Biod225	
Ammoniae225	
kJ225	
Foodwt226	Protein powders, bars, day 2
Carbonfp226	
Landuse226	
Ninput226	
Pinput226	
Bluewater226	
Pesticide226	
Biod226	
Ammoniae226	
kJ226	
Foodwt231	Bread, day 2
Carbonfp231	

Landuse231	
Ninput231	
Pinput231	
Bluewater231	
Pesticide231	
Biod231	
Ammoniae231	
kJ231	
Foodwt232	Breakfast cereals, day 2
Carbonfp232	
Landuse232	
Ninput232	
Pinput232	
Bluewater232	
Pesticide232	
Biod232	
Ammoniae232	
kJ232	
Foodwt233	Pasta, day 2
Carbonfp233	
Landuse233	
Ninput233	
Pinput233	
Bluewater233	
Pesticide233	
Biod233	
Ammoniae233	
kJ233	
Foodwt234	Rice and noodles, day 2
Carbonfp234	
Landuse234	

Ninput234	
Pinput234	
Bluewater234	
Pesticide234	
Biod234	
Ammoniae234	
kJ234	
Foodwt235	Cereal-based dishes, day 2
Carbonfp235	
Landuse235	
Ninput235	
Pinput235	
Bluewater235	
Pesticide235	
Biod235	
Ammoniae235	
kJ235	
Foodwt271	Red meat, day 2
Carbonfp271	
Landuse271	
Ninput271	
Pinput271	
Bluewater271	
Pesticide271	
Biod271	
Ammoniae271	
kJ271	
Foodwt272	Meat dishes, day 2
Carbonfp272	
Landuse272	
Ninput272	

Pinput272	
Bluewater272	
Pesticide272	
Biod272	
Ammoniae272	
kJ272	
Foodwt273	Processed meat, day 2
Carbonfp273	
Landuse273	
Ninput273	
Pinput273	
Bluewater273	
Pesticide273	
Biod273	
Ammoniae273	
kJ273	
Foodwt2111	Potatoes, day 2
Carbonfp2111	
Landuse2111	
Ninput2111	
Pinput2111	
Bluewater2111	
Pesticide2111	
Biod2111	
Ammoniae2111	
kJ2111	
Vegg- Protmm_kJ	*Description and units are displayed in Vegg- Veg_kJ*
Vegg	Amounts grams/day Vegetables incl. Dishes, mean of two days
Veg_cf	Carbon footprint, kg CO2 equalents/day
Veg_land	Landuse, m^2*year/day
Veg_N	N input, kg/day

Veg_P	P input, kg/day
Veg_water	Blue water, m^3/day
Veg_pest	Pesticides use, kg/day
Veg_biod	Biodiversity impact, E/MSY per day
Veg_amm	Ammonia emission, kg/day
Veg_kJ	Energy intake, kJ/day
Potg	Potatoes incl. dishes, mean of two days
Pot_cf	
Pot_land	
Pot_N	
Pot_P	
Pot_water	
Pot_pest	
Pot_biod	
Pot_amm	
Pot_kJ	
Vegdishg	Vegetables potatoes incl. dishes, mean of two days
Vegdish_cf	
Vegdish_land	
Vegdish_N	
Vegdish_P	
Vegdish_water	
Vegdish_pest	
Vegdish_biod	
Vegdish_amm	
Vegdish_kJ	
Fruitg	Fruit, mean of two days
Fruit_cf	
Fruit_land	
Fruit_N	
Fruit_P	

Fruit_water	
Fruit_pest	
Fruit_biod	
Fruit_amm	
Fruit_kJ	
Breadg	Bread, mean of two days
Bread_cf	
Bread_land	
Bread_N	
Bread_P	
Bread_water	
Bread_pest	
Bread_biod	
Bread_amm	
Bread_kJ	
Breakf_cerealsg	Breakfast cereals, mean of two days
Breakf_cereals_cf	
Breakf_cereals_land	
Breakf_cereals_N	
Breakf_cereals_P	
Breakf_cereals_water	
Breakf_cereals_pest	
Breakf_cereals_biod	
Breakf_cereals_amm	
Breakf_cereals_kJ	
Pastag	Pasta, mean of two days
Pasta_cf	
Pasta_land	
Pasta_N	
Pasta_P	
Pasta_water	

Pasta_pest	
Pasta_biod	
Pasta_amm	
Pasta_kJ	
Riceg	Rice, mean of two days
Rice_cf	
Rice_land	
Rice_N	
Rice_P	
Rice_water	
Rice_pest	
Rice_biod	
Rice_amm	
Rice_kJ	
Cerealdishesg	Cereal-based dishes, mean of two days
Cerealdishes_cf	
Cerealdishes_land	
Cerealdishes_N	
Cerealdishes_P	
Cerealdishes_water	
Cerealdishes_pest	
Cerealdishes_biod	
Cerealdishes_amm	
Cerealdishes_kJ	
Cereals_totg	Cereals products, all, mean of two days
Cereals_tot_cf	
Cereals_tot_land	
Cereals_tot_N	
Cereals_tot_P	
Cereals_tot_water	
Cereals_tot_pest	

Cereals_tot_biod	
Cereals_tot_amm	
Cereals_tot_kJ	
Butterg	Milk, yoghurts, mean of two days
Butter_cf	
Butter_land	
Butter_N	
Butter_P	
Butter_water	
Butter_pest	
Butter_biod	
Butter_amm	
Butter_kJ	
Cheeseg	Cheese, mean of two days
Cheese_cf	
Cheese_land	
Cheese_N	
Cheese_P	
Cheese_water	
Cheese_pest	
Cheese_biod	
Cheese_amm	
Cheese_kJ	
Butterg	Butter, mean of two days
Butter_cf	
Butter_land	
Butter_N	
Butter_P	
Butter_water	
Butter_pest	
Butter_biod	

Butter_amm	
Butter_kJ	
Dairyg	Dairy, mean of two days
Dairy_cf	
Dairy_land	
Dairy_N	
Dairy_P	
Dairy_water	
Dairy_pest	
Dairy_biod	
Dairy_amm	
Dairy_kJ	
Redmeatg	Red meat, mean of two days
Redmeat_cf	
Redmeat_land	
Redmeat_N	
Redmeat_P	
Redmeat_water	
Redmeat_pest	
Redmeat_biod	
Redmeat_amm	
Redmeat_kJ	
Meatdishesg	Meat dishes, mean of two days
Meatdishes_cf	
Meatdishes_land	
Meatdishes_N	
Meatdishes_P	
Meatdishes_water	
Meatdishes_pest	
Meatdishes_biod	
Meatdishes_amm	

Meatdishes_kJ	
Processedmeatg	Processed meats, mean of two days
Processedmeat_cf	
Processedmeat_land	
Processedmeat_N	
Processedmeat_P	
Processedmeat_water	
Processedmeat_pest	
Processedmeat_biod	
Processedmeat_amm	
Processedmeat_kJ	
Meatg	Meat tot, mean of two days
Meat_cf	
Meat_land	
Meat_N	
Meat_P	
Meat_water	
Meat_pest	
Meat_biod	
Meat_amm	
Meat_kJ	
Poultryeggg	Poultry, eggs, mean of two days
Poultryegg_cf	
Poultryegg_land	
Poultryegg_N	
Poultryegg_P	
Poultryegg_water	
Poultryegg_pest	
Poultryegg_biod	
Poultryegg_amm	
Poultryegg_kJ	

Fishg	Fish, seafood, mean of two days
Fish_cf	
Fish_land	
Fish_N	
Fish_P	
Fish_water	
Fish_pest	
Fish_biod	
Fish_amm	
Fish_kJ	
Vegprodg	Meat alternatives, mean of two days
Vegprod_cf	
Vegprod_land	
Vegprod_N	
Vegprod_P	
Vegprod_water	
Vegprod_pest	
Vegprod_biod	
Vegprod_amm	
Vegprod_kJ	
Snacksg	Salty snacks, mean of two days
Snacks_cf	
Snacks_land	
Snacks_N	
Snacks_P	
Snacks_water	
Snacks_pest	
Snacks_biod	
Snacks_amm	
Snacks_kJ	
Sweetsg	Sweets, mean of two days

Sweets_cf	
Sweets_land	
Sweets_N	
Sweets_P	
Sweets_water	
Sweets_pest	
Sweets_biod	
Sweets_amm	
Sweets_kJ	
Nutsseedsg	Nuts, seeds, mean of two days
Nutsseeds_cf	
Nutsseeds_land	
Nutsseeds_N	
Nutsseeds_P	
Nutsseeds_water	
Nutsseeds_pest	
Nutsseeds_biod	
Nutsseeds_amm	
Nutsseeds_kJ	
SSBg	Soft drinks, juices, mean of two days
SSB_cf	
SSB_land	
SSB_N	
SSB_P	
SSB_water	
SSB_pest	
SSB_biod	
SSB_amm	
SSB_kJ	
Alcoholg	Alcohol, mean of two days
Alcohol_cf	

Alcohol_land	
Alcohol_N	
Alcohol_P	
Alcohol_water	
Alcohol_pest	
Alcohol_biod	
Alcohol_amm	
Alcohol_kJ	
Dessertsg	Desserts, mean of two days
Desserts_cf	
Desserts_land	
Desserts_N	
Desserts_P	
Desserts_water	
Desserts_pest	
Desserts_biod	
Desserts_amm	
Desserts_kJ	
Coffeeteag	Coffee, tea, cocoa, mean of two days
Coffeetea_cf	
Coffeetea_land	
Coffeetea_N	
Coffeetea_P	
Coffeetea_water	
Coffeetea_pest	
Coffeetea_biod	
Coffeetea_amm	
Coffeetea_kJ	
Sugarsg	Sugars, jam, honey, mean of two days
Sugars_cf	
Sugars_land	

Sugars_N	
Sugars_P	
Sugars_water	
Sugars_pest	
Sugars_biod	
Sugars_amm	
Sugars_kJ	
Cakescookiesg	Sweet Bread, cakes, cookies, mean of two days
Cakescookies_cf	
Cakescookies_land	
Cakescookies_N	
Cakescookies_P	
Cakescookies_water	
Cakescookies_pest	
Cakescookies_biod	
Cakescookies_amm	
Cakescookies_kJ	
Sweetfoodsg	Sweet food, tot, mean of two days
Sweetfoods_cf	
Sweetfoods_land	
Sweetfoods_N	
Sweetfoods_P	
Sweetfoods_water	
Sweetfoods_pest	
Sweetfoods_biod	
Sweetfoods_amm	
Sweetfoods_kJ	
Saucesg	Sauces, mean of two days
Sauces_cf	
Sauces_land	
Sauces_N	

Sauces_P	
Sauces_water	
Sauces_pest	
Sauces_biod	
Sauces_amm	
Sauces_kJ	
Vatteng	Water, mean of two days
Vegfatg	Vegetable fats, mean of two days
Vegfat_cf	
Vegfat_land	
Vegfat_N	
Vegfat_P	
Vegfat_water	
Vegfat_pest	
Vegfat_biod	
Vegfat_amm	
Vegfat_kJ	
Protmmg	Protein products, mean of two days
Protmm_cf	
Protmm_land	
Protmm_N	
Protmm_P	
Protmm_water	
Protmm_pest	
Protmm_biod	
Protmm_amm	
Protmm_kJ	

Variables Vegkgy – Protmmy are described in Vegkgy - Protmm_ammy

Vegkgy	Vegetables incl. dishes, kg per year
Veg_MJy	Energy intake, MJ/year

Veg_cfy	Carbon footprint, kg CO2e/year
Veg_landy	Land use, m^2*year/year
Veg_Ny	new N input, kg/year
Veg_Py	new P input, kg/year
Veg_watery	Blue water, m^3/year
Veg_pesty	Pesticides use, kg/year
Veg_biody	Biodiversity impact, g a.i./year
Veg_ammy	Ammonia emission, kg/year
Potkgy	Potatoes incl. dishes, kg per year
Pot_MJy	
Pot_cfy	
Pot_landy	
Pot_Ny	
Pot_Py	
Pot_watery	
Pot_pesty	
Pot_biody	
Pot_ammy	
Vegdishkgy	Vegetables & potatoes incl. dishes, per year
Vegdish_MJy	
Vegdish_cfy	
Vegdish_landy	
Vegdish_Ny	
Vegdish_Py	
Vegdish_watery	
Vegdish_pesty	
Vegdish_biody	
Vegdish_ammy	
Fruitkgy	Fruit, per year
Fruit_MJy	
Fruit_cfy	

Fruit_landy

Fruit_Ny

Fruit_Py

Fruit_watery

Fruit_pesty

Fruit_biody

Fruit_ammy

Breadkgy Bread, per year

Bread_MJy

Bread_cfy

Bread_landy

Bread_Ny

Bread_Py

Bread_watery

Bread_pesty

Bread_biody

Bread_ammy

Breakf_cerealskgy Breakfast cereals, per year

Breakf_cereals_MJy

Breakf_cereals_cfy

Breakf_cereals_landy

Breakf_cereals_Ny

Breakf_cereals_Py

Breakf_cereals_watery

Breakf_cereals_pesty

Breakf_cereals_biody

Breakf_cereals_ammy

Pastakgy Pasta, per year

Pasta_MJy

Pasta_cfy

Pasta_landy

Pasta_Ny

Pasta_Py

Pasta_watery

Pasta_pesty

Pasta_biody

Pasta_ammy

Riskgy Rice, per year

Ris_MJy

Ris_cfy

Ris_landy

Ris_Ny

Ris_Py

Ris_watery

Ris_pesty

Ris_biody

Ris_ammy

Cerealdisheskgy Cereal-based dishes, per year

Cerealdishes_MJy

Cerealdishes_cfy

Cerealdishes_landy

Cerealdishes_Ny

Cerealdishes_Py

Cerealdishes_watery

Cerealdishes_pesty

Cerealdishes_biody

Cerealdishes_ammy

Cereals_totkgy Cereals products, all, per year

Cereals_tot_MJy

Cereals_tot_cfy

Cereals_tot_landy

Cereals_tot_Ny

Cereals_tot_Py

Cereals_tot_watery

Cereals_tot_pesty

Cereals_tot_biody

Cereals_tot_ammy

Milkkgy Milk, yoghurts, per year

Milk_MJy

Milk_cfy

Milk_landy

Milk_Ny

Milk_Py

Milk_watery

Milk_pesty

Milk_biody

Milk_ammy

Cheesekgy Cheese, per year

Cheese_MJy

Cheese_cfy

Cheese_landy

Cheese_Ny

Cheese_Py

Cheese_watery

Cheese_pesty

Cheese_biody

Cheese_ammy

Butterkgy Butter, per year

Butter_MJy

Butter_cfy

Butter_landy

Butter_Ny

Butter_Py

Butter_watery	
Butter_pesty	
Butter_biody	
Butter_ammy	
Dairykgy	Dairy, per year
Dairy_MJy	
Dairy_cfy	
Dairy_landy	
Dairy_Ny	
Dairy_Py	
Dairy_watery	
Dairy_pesty	
Dairy_biody	
Dairy_ammy	
Redmeatkgy	Red meat, per year
Redmeat_MJy	
Redmeat_cfy	
Redmeat_landy	
Redmeat_Ny	
Redmeat_Py	
Redmeat_watery	
Redmeat_pesty	
Redmeat_biody	
Redmeat_ammy	
Meatdisheskgy	Meat dishes, per year
Meatdishes_MJy	
Meatdishes_cfy	
Meatdishes_landy	
Meatdishes_Ny	
Meatdishes_Py	
Meatdishes_watery	

Meatdishes_pesty	
Meatdishes_biody	
Meatdishes_ammy	
Processedmeatkgy	Processed meats, per year
Processedmeat_MJy	
Processedmeat_cfy	
Processedmeat_landy	
Processedmeat_Ny	
Processedmeat_Py	
Processedmeat_watery	
Processedmeat_pesty	
Processedmeat_biody	
Processedmeat_ammy	
Meatkgy	Total meat, per year
Meat_MJy	
Meat_cfy	
Meat_landy	
Meat_Ny	
Meat_Py	
Meat_watery	
Meat_pesty	
Meat_biody	
Meat_ammy	
Poultryeggkgy	Poultry, eggs, per year
Poultryegg_MJy	
Poultryegg_cfy	
Poultryegg_landy	
Poultryegg_Ny	
Poultryegg_Py	
Poultryegg_watery	
Poultryegg_pesty	

Poultryegg_biody	
Poultryegg_ammy	
Fishkgy	Fish, seafood, per year
Fish_MJy	
Fish_cfy	
Fish_landy	
Fish_Ny	
Fish_Py	
Fish_watery	
Fish_pesty	
Fish_biody	
Fish_ammy	
Vegprodkgy	Meat alternatives, per year
Vegprod_MJy	
Vegprod_cfy	
Vegprod_landy	
Vegprod_Ny	
Vegprod_Py	
Vegprod_watery	
Vegprod_pesty	
Vegprod_biody	
Vegprod_ammy	
Snackskgy	Salty snacks, kg per year
Snacks_MJy	
Snacks_cfy	
Snacks_landy	
Snacks_Ny	
Snacks_Py	
Snacks_watery	
Snacks_pesty	
Snacks_biody	

Snacks_ammy	
Sweetskgy	Candy and chocolates, per year
Sweets_MJy	
Sweets_cfy	
Sweets_landy	
Sweets_Ny	
Sweets_Py	
Sweets_watery	
Sweets_pesty	
Sweets_biody	
Sweets_ammy	
Nutsseedskgy	Nuts, seeds, per year
Nutsseeds_MJy	
Nutsseeds_cfy	
Nutsseeds_landy	
Nutsseeds_Ny	
Nutsseeds_Py	
Nutsseeds_watery	
Nutsseeds_pesty	
Nutsseeds_biody	
Nutsseeds_ammy	
SSBkgy	Soft drinks, juices, per year
SSB_MJy	
SSB_cfy	
SSB_landy	
SSB_Ny	
SSB_Py	
SSB_watery	
SSB_pesty	
SSB_biody	
SSB_ammy	

Alcoholkgy	Alcohol, per year
Alcohol_MJy	
Alcohol_cfy	
Alcohol_landy	
Alcohol_Ny	
Alcohol_Py	
Alcohol_watery	
Alcohol_pesty	
Alcohol_biody	
Alcohol_ammy	
Dessertskgy	Desserts, per year
Desserts_MJy	
Desserts_cfy	
Desserts_landy	
Desserts_Ny	
Desserts_Py	
Desserts_watery	
Desserts_pesty	
Desserts_biody	
Desserts_ammy	
Coffeeteakgy	Coffee, tea, cocoa, per year
Coffeetea_MJy	
Coffeetea_cfy	
Coffeetea_landy	
Coffeetea_Ny	
Coffeetea_Py	
Coffeetea_watery	
Coffeetea_pesty	
Coffeetea_biody	
Coffeetea_ammy	
Sugarskgy	Sugars, jam, honey, per year

Sugars_MJy	
Sugars_cfy	
Sugars_landy	
Sugars_Ny	
Sugars_Py	
Sugars_watery	
Sugars_pesty	
Sugars_biody	
Sugars_ammy	
Cakescookieskgy	Sweet Bread, cakes, cookies, per year
Cakescookies_MJy	
Cakescookies_cfy	
Cakescookies_landy	
Cakescookies_Ny	
Cakescookies_Py	
Cakescookies_watery	
Cakescookies_pesty	
Cakescookies_biody	
Cakescookies_ammy	
Sweetfoodskgy	Sweet food, tot, per year
Sweetfoods_MJy	
Sweetfoods_cfy	
Sweetfoods_landy	
Sweetfoods_Ny	
Sweetfoods_Py	
Sweetfoods_watery	
Sweetfoods_pesty	
Sweetfoods_biody	
Sweetfoods_ammy	
Sauceskgy	Sauces, per year
Sauces_MJy	

Sauces_cfy	
Sauces_landy	
Sauces_Ny	
Sauces_Py	
Sauces_watery	
Sauces_pesty	
Sauces_biody	
Sauces_ammy	
Vattenkgy	Water, per kg year
Vegfettkgy	Vegetable fats, per year
Vegfett_MJy	
Vegfett_cfy	
Vegfett_landy	
Vegfett_Ny	
Vegfett_Py	
Vegfett_watery	
Vegfett_pesty	
Vegfett_biody	
Vegfett_ammy	
Protmmkgy	Protein products, per year
Protmm_MJy	
Protmm_cfy	
Protmm_landy	
Protmm_Ny	
Protmm_Py	
Protmm_watery	
Protmm_pesty	
Protmm_biody	
Protmm_ammy	
School_grade	1=school grade 5; 2=school grade 8; 3=school grade 2 gymnasium
Sex	Male; Female

age	year
weight	kg
height	meter
bmi_status_IOTF	Under weight (UW); Normal weight (NW); Over weight (OW); Obese (OB) according IOTF definition [a]
BMI	kg/m^2
Overweight	UW/NW or OW/OB
Obesity	No=0; Yes=1
Edu_highest	<=12; >12 years (at least one parent >12 years of education)
Skolenhetskod	a unique number for each school unit
ani_cfy	Animal-based foods, kg CO2e/year
plant_cfy	Plant-based foods, kg CO2e/year
discr_cfy	Discretionary foods, kg CO2e/year
sum_cfy	Total, kg CO2e/year
ani_landy	Animal-based foods, land use, m^2*year/year
plant_landy	Plant-based foods, land use, m^2*year/year
discr_landy	Discretionary foods, land use, m^2*year/year
sum_landy	Total, land use, m^2*year/year
ani_Ny	Animal-based foods, new N input, kg/year
plant_Ny	Plant-based foods, new N input, kg/year
discr_Ny	Discretionary foods, new N input, kg/year
sum_Ny	Total new N input/year, new N input, kg/year
ani_Py	Animal-based foods, new P input, kg/year
plant_Py	Plant-based foods, new P input, kg/year
discr_Py	Discretionary foods, new P input, kg/year
sum_Py	Total, new P input, kg/year
ani_watery	Animal-based foods, blue water, m^3/year
plant_watery	Plant-based foods, blue water, m^3/year
discr_watery	Discretionary foods, blue water, m^3/year
sum_watery	Total, blue water, m^3/year
ani_pesty	Animal-based foods, pesticides use, g a.i./year

plant_pesty	Plant-based foods, pesticides use, g a.i./year
discr_pesty	Discretionary foods, pesticides use, g a.i./year
sum_pesty	Total, pesticides use, g a.i./year
ani_biody	Animal-based foods, biodiversity impact land, E/MSY per year
plant_biody	Plant-based foods, biodiversity impact land, E/MSY per year
discr_biody	Discretionary foods, biodiversity impact land, E/MSY per year
sum_biody	Total, biodiversity impact land, E/MSY per year
ani_ammy	Animal-based foods, ammonia emission, kg/year
plant_ammy	Plant-based foods, ammonia emission, kg/year
discr_ammy	Discretionary foods, ammonia emission, kg/year
sum_ammy	Total, ammonia emission, kg/year
anikgy	Animal-based foods, amounts, kg/year
plantkgy	Plant-based foods, amounts, kg/year
discrkgy	Discretionary foods, amounts, kg/year
sumkgy	Total, amounts of animal-based food, kg/year
ani_MJy	Animal-based foods, energy intake, MJ/year
plant_MJy	Plant-based foods, energy intake, MJ/year
discr_MJy	Discretionary foods, energy intake, MJ/year
sum_MJy	Total, energy intake, MJ per year