

DANUBE RIVER BASIN MANAGEMENT PLAN

UPDATE 2021

ANNEX 15

Progress of Measure Implementation in the
Agricultural Sector

ICPDR **IKSD**

International Commission
for the Protection
of the Danube River
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Internationale Kommission
zum Schutz der Donau



Table 1: Nitrates Directive implementation

Country	MEASURES						
	Nitrates Directive implementation status	NVZ designation method and NVZ area (ha agricultural land)	Manure storage capacity (months)	Prohibition periods for applying fertilizer and manure (months)	Limitation of N and P application		Restrictions of some agricultural activities on slopes (slope in %)
					kg/ha on agricultural land	kg/ha on grass land	
DE	Implemented.	Whole territory approach according to Article 5 (6) of the ND. In addition areas with a high nitrate contamination of the groundwater are designated ("red areas"): 385 Tha in whole Bavaria 30 Tha in whole Baden-Württemberg.	At least 6 months: Manure and digestate that are produced on the farm have to be stored for a fixed time. Liquid manure and liquid/solid digestate require 6 month storing capacity. Farms with more than 3 LSU/ha or without own application areas have to prove 9 months storing capacity for liquid manure. For solid manure and compost the required storing capacity has to be at least 2 months.	On arable land the prohibition period starts with the harvest of the last main crop and lasts up to including 31st January. If an autumn application is required, the following exception applies for: - catch crops, winter rapeseed and field forage, - winter barley after growing grains These crops can be fertilized until 1st October with up to 30 kg of ammonium-N or 60 kg total-N per ha. On grassland the blocking period starts with 1st November and lasts up to including 31st January.	170 kg N/ha from livestock manure in line with ND.	170 kg N/ha from livestock manure in line with ND.	The minimum distance to water bodies for the fertiliser (N/P) spreading: The width of the fertiliser-free strip depends on the terrain slope and the technique: Areas that have a slope of less than 5% require a distance of 4 meters to the top edge of the embankment. If a boundary spreading device is used the fertiliser-free strip is reduced to 1 meter. On farm- and grassland with an average slope of 5% or more in the first 20 meters form the embankment top edge no fertiliser can be spread closer than 4 meters to the embankment top edge. If a boundary spreading device is used the fertiliser-free strip is reduced to 3 meters. For 10% or more the distance is 5 meters. On farm- and grassland with an average slope of 15% or more in the first 30 meters form the embankment top edge no fertiliser can be spread closer than 10 meters to the embankment top edge.

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AT	Fully implemented; revised nitrates action programme in force since 1.1.2018.	Whole territory approach according to Article 5 (6) of the ND. Code of good agricultural practice is therefore included in the Nitrates Action Programme (ca. 3.2 mio. ha).	At least 6 months in general; at least 10 months for farms located in communities of Annex 5 with: - more than 100 kg nitrogen annually from pig slurry; - more than 1.000 kg nitrogen annually from slurry, -if more than 60% of agricultural areas are used for maize production, - if no agricultural areas is used by farm or if more than 250 kg nitrogen per hectare of agricultural area per year is produced.	15th Oct - 15th Feb of the following year on agricultural land in general for mineral fertilizer, slurry, biogas slurry and digestates, the prohibition period starts with 15th Nov, if catch crop or following crop is sown until 15th October; 30th Nov - 15th Feb of the following year for mineral fertilizer, slurry, biogas slurry and digestates on grassland, 30th Nov - 15th February for farmyard manure, compost; Application limit for mineral fertilizer, slurry, biogas slurry and digestates within the period -from harvest till the beginning of the respective prohibition period and -for grassland from 1st Oct till the beginning of the respective prohibition period with not more than 60 kg of N per hectare.	60 - 240 kg N/ha depending on crop requirement (expected crop yield) and soil potential in total (170 kg N/ha from livestock manure in line with ND).	40 - 280 kg N/ha depending on no. of cuts.	Application of N containing fertilizers including sewage sludge on agricultural fields with average slope of more than 10% within distance of 20m towards surface waters has to comply with the following obligations: -application of more than 100 kg nitrogen per hectare– with the exception of solid manure and compost - has to be split; -for crops with a late growing season measures for reducing soil erosion have to be applied (horizontal sowing stripes with soil covering plants, buffer strips, direct seeding, vegetation over winter period.

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CZ	The 5th Action Programme and NVZ revision for 2020–2024 period, valid since 1 July 2020.	Area of NVZ revised for ND in 2019 (valid since 2020), adjusted to land parcels – 1 895 483 ha (arable land – 1 571 907 ha and permanent grassland - 293 070 ha) – 53,30 % of agricultural area according to LPIS. Quality monitoring report in 2020. Code of Good Agricultural practices application is obligatory in the whole agricultural area according to LPIS – area of 3 556 340 ha (35 563,40 km ²), in line with ND. ND requirements are obligatory for NVZ defined. For the rest of agricultural areas are implemented on the voluntary bases.	The capacity of storage spaces for manure must be sufficient for storing of manure during the period of ban for the fertilization. The deposition of solid manure and solid organic fertilizers on agricultural land is permissible for 12 months at longest. The deposition at the same place can be repeated after 4 years of land cultivation. The capacity of storage spaces for manure will have to correspond to the need for storage of their six-month production.	Use of fertilizers with a slow releasable N on arable land and permanent grassland is prohibited between 1. 6. – 31. 7. (this provision does not apply in the case of subsequent cultivation of winter crops and catch crops) and in period between 15.12 - 15.2. (15. 12. – 28. 2. in highlands). Use of fertilizers with slow releasable N is prohibited between 15.11. - 15.2. (15. 11. – 28. 2. or 5. 11. – 28. 2., in highlands).	The quantity of total N kg/ha applied annually on agricultural land in organic and combined organic/inorganic fertilizers, livestock manure and sewage sludge cannot exceed on average in total area of agricultural land of farm enterprise 170 kg ha ⁻¹ , while including agricultural land appropriate for fertilization. For each crop the N limits of effective N has been defined.	Application of N fertilizing substances is restricted to 160 kg of effective N/ha. The calculation of used effective N dose per ha shall be carried out on the basis of data on total N input in organic and combined organic / inorganic fertilizers and livestock manure.	Appropriate N limits and agrotechnical erosion control measures which are in the conformity with site conditions shall be carried out on agricultural plots with arable land on erosion endangered soils, delimited in accordance with main soil unit (limit of 7 or 12 degrees).

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SK	Implemented, without infringement.	NVZs designed according to Articles 3 (2) and 3 (4) of Nitrates Directive. Existing NVZs represent part of agricultural and as of 31.12.2019 it represented 11 891.47 km ² . Last revision of NVZs, completed in December 2020, will take effect from January 2022.	Storage capacities for solid or liquid manure should correspond with six-month of their production. In the case of insufficient storage capacity, animal manure can be stored at another subject or upload it for other uses in volume corresponding up to 3 month-storage capacity.	Prohibition period of animal manure N application is differentiated according to a) category of animal manure, b) category of agricultural land – separately for arable land and permanent grasslands, and c) climate and ranges from October 5th to 30th November in autumn to February 15th. The period of N application in fertilizers ranges from October 5th to October 20th in the autumn to February 15th. On agricultural land with slope up to 5°, the inspection body may grant an exemption from the ban for a period of 14 days from beginning of the prohibited period or 14 days before the end of the prohibited period.	Besides ND limit (170 kg N/ha from animal manures) N inputs are limited also via maximum total N input with respect to yield level of individual crops as well as the maximum single N rate in fertilizers. P inputs in fertilizers are regulated especially with regard to available soil P supply and crop demand on specified yield.	Total animal manure N rate is limited by NID limit. Phosphorous application on permanent grasslands is not limited and its input is mainly from animal manure or excreta.	On the slopes are the following restrictions / demands: 1) To use the agricultural land as arable land with a slope above 12°; 2) Apply fertilizer N on slopes above 10° at arable land unless incorporated into soil within 24 hours after application; in the case of permanent grasslands it applies on slopes above 12°; 3) On agricultural land adjacent to water resources with slope below 7°, application of nitrogen fertilizers shall not be used in zone 10-20 m from the bank of water course or flood line of reservoir. 4) On the arable land adjacent to water resources with slopes above 7°, fertilizers containing nitrogen must not be applied in zone 25 m from water courses; in the case of row-crops are cultivated on these spots, additional of defined measures must be taken.
HU	Hungary implements Nitrate Directive under Government Decree No. 27/2006 (II.7.) on the protection of waters against pollution caused by nitrates of agricultural sources and under Regulation 59/2008. (IV.29) FVM on the detailed rules of the action programme	HU transposed the ND. The designation entered into force by Government Decree No. 27/2006. (II.7.) on the protection of waters against pollution caused by nitrates of agricultural sources. The designation was carried out according to the ND. The revision of the NVZ's is fulfilled. The rules of the Code of Good Agricultural Practices are obligatory on the NVZ's (6,5 million	In accordance with The Code of Good Agricultural Practice the capacity of the farmyard manure storage facility shall be sufficient for the storage of 6 months' volume of farmyard manure.	No manure shall be applied between 30 Nov and 15 Feb, except for the top dressing of winter cereals where manure application will be permitted from the 1st Feb. The post-harvest application of manure containing readily soluble nitrogen is prohibited if no new crop is sown in autumn. The application of fertilizers is not allowed on frozen soil and on lands saturated with water or covered with snow.	The annual volume of N applied through organic manure on agricultural areas may not exceed 170 kg/ha. Whether it originates from grazing or from livestock farms, the volume of N applied shall be calculated by using the values in the rules of the action programme. On NVZ areas the maximum volume of total (organic + inorganic) N kg/ha allowed for major	No special limit value for grass land in Hungary.	As for plantations on slopes more than 15 %, fertilizers may be applied only if the anti-erosion measures specified in the soil protection plan to be compiled pursuant to separate legislation are fulfilled. The application of slurry will not be allowed on slopes above 6%, except if done with the sliding hose (hose curtain) procedure that may be used on slopes of maximum 12%. If applied on slopes above 12%, the chemical fertilizers shall be promptly incorporated into the soil except for top dressing. The application of fertilizers will not be allowed on slopes above 17%. On slopes more than 2 % for the hindering of erosion such cultivation method shall be used which enhances the absorption of rainwater in the soil due to the conservation of the soil structure and the

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	required for the protection of waters against pollution caused by nitrates from agricultural sources and on the procedures for data provision and registration. The Hungarian Action Programme was published for the first time in 2001.	ha). Outside the NVZ's, the agri environmental measures assist the implementation of GAP on voluntary basis.			crops during the vegetation period by soil category and soil nutrient supply is set.		hindering or elimination of soil compaction.
SI		Whole territory approach according to Article 5 (6) of the ND. Code of good agricultural practice is therefore included in the Nitrates Action Programme namely the Decree on the Protection of Waters against Pollution Caused by Nitrates from Agricultural Sources (Uradni list RS, št.113/09, 5/13, 22/15 in 12/17 hereinafter: Decree).	The capacity of manure storage is set out in Article 12 of the Decree. It is set out that the capacity of storage facilities for livestock manure shall be adjusted to the number and species of animals on an agricultural holding and shall provide sufficient capacity for at least six months' storage. The minimum necessary capacity levels for livestock manure storage facilities are set out in Table 3 of Annex 1 of the mentioned Decree.	Liquid organic fertilisers between 15 Nov. and 1 March. Exceptions concerning liquid organic fertilisers: a) from 15 Nov. to 15 Feb. in the case of the preparation of land for the sowing of spring cereals, grasses and grass-clover mixtures or the spring fertilisation of winter cereals and seeded grassland. b) in cadastral municipalities listed in Annex 2 of the Decree on agricultural land with green cover from 15 Dec. to 15 Jan. and on agricultural land without green cover from 1 Dec. to 15 Febr. c) in cadastral municipalities listed in Annex 2 of the Decree from 1 Dec. to 31 Jan. on agricultural land without green cover in the	Livestock manure: 170 kg N/ha of agricultural land in use at the level of the agricultural holding. The annual land application of nitrogen from livestock manure shall be calculated on the basis of data on the number of animals on the agricultural holding and the annual quantity of nitrogen in livestock manure produced by individual species and categories of livestock and which is shown in Table 1 of Annex 1 of the Decree. The annual application of	From livestock manure: 170 kg N/ha of agricultural land in use at the level of the agricultural holding. The annual land application of nitrogen from livestock manure shall be calculated on the basis of data on the number of animals on the agricultural holding and the annual quantity of nitrogen in livestock manure produced by individual species and categories of livestock and which is shown in	On steeply sloping land that incline towards surface waters, the doses of organic and mineral fertilisers that contain nitrogen shall be divided into several parts so that one-time dose of applied nitrogen does not exceed 80 kg/ha. In addition to the requirements, one of the following measures must be ensured in fertilisation on fields that lie on steeply sloping ground inclined towards surface waters: the field must be bounded by transverse green zones, or there must be a belt of land at least 15 m wide, with green cover or containing other agricultural crops, or the field must be worked transversely to the slope, or the field must have green cover throughout the winter.

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				<p>case of the preparation of land for the sowing of spring cereals, grasses and grass-clover mixtures.</p> <p>Solid manure, compost or digestate, where the latter contains more than 20 percent of dry matter. from 1 Dec. to 15 Febr. and in cadastral municipalities listed in Annex 2 of the Decree from 15 Dec. to 15 Jan.</p> <p>Mineral fertilisers containing nitrogen: from 15 Oct. to 1 Mar.</p> <p>a) winter cereals: from 1 Dec. to 15 Febr.</p> <p>b) in cadastral municipalities listed in Annex 2 of the Decree on agricultural land with green cover from 15 Dec. to 15 Jan. and on agricultural land without green cover from 1 Dec. to 31 Jan.</p> <p>c) In the period from 1 Sep. to the beginning of the prohibition period, the input of nitrogen into the soil in the form of mineral fertilisers must not exceed 40 kg N/ha.</p>	<p>nitrogen from organic fertilisers per single unit of agricultural land use may not exceed 250 kg N/ha. Limit value kg N/ha and expected yields are indicated in Table 4 of Annex 1 to the Decree. Limit values of nitrogen input to the soil represents the amount of nitrogen that can be introduced into the soil for individual plants in the form of mineral and organic fertilizers and when irrigating plants, taking into account the expected crops, in the period from soil preparation for sowing to harvest and for permanent crops and meadows for a period of one calendar.</p>	<p>Table 1 of Annex 1 of the Decree. The annual application of nitrogen from organic fertilisers per single unit of agricultural land use may not exceed 250 kg N/ha. Limit value kg N/ha and expected yields are indicated in Table 4 of Annex 1 to the Decree. Limit values of nitrogen input to the soil represents the amount of nitrogen that can be introduced into the soil for individual plants in the form of mineral and organic fertilizers and when irrigating plants, taking into account the expected crops, in the period from soil preparation for sowing to harvest and for permanent crops and meadows for a period of one calendar.</p>	
HR		NVZ in Croatia are established through the	According to the III Action Programme the	According to the III Action Programme application of	The application limit is 170 kg N/ha/year.	Limits for application of	According to the Ordinance on Cross compliance, OG 113/19, agricultural

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		Governmental Decision on designation of vulnerable zones, OG 130/12. Vulnerable zones in Croatia cover 9 % of land territory (75 local municipalities and cities). The Brochure Codes of Good Agricultural Practice has been issued in 2009 by Croatian Ministry of Agriculture in cooperation with Croatian Advisory Service. The Brochure consists of Codes of Good Agricultural Practice in usage of Land, Air, Water and Animal Welfare.	requirement for storage capacity is 6 months.	manure is prohibited from 15th of November until 15th of February. Also the application of fertilisers and manure is prohibited on water saturated, flooded, frozen or snow covered agricultural land.	Moreover, in the Action Programme the limits for application of nitrogen according to the agricultural plant species are prescribed.	nitrogen on grassland is 170 kg N/ha.	activity on slopes with inclination 15 % or more must be conducted perpendicular to the slope.
BA	According to Water Law, there is obligation for detections, methodologies, obligations and restrictions of activities in NVZ and monitoring of NVZ, which will be proclaimed by Ministry of agriculture, forestry and water management in cooperation with Ministry in charge of ecology, but no by-law or decision, yet.	According to: Basic principles of good agricultural practice in the use of fertilizers, which are prescribed by the Rulebook on conditions, manner and methods for testing the fertility of agricultural land and determining the amount of mineral fertilizers and pesticides ("Official Gazette of Republika Srpska" No. 26/14), recommended: fertilizer storage on a six-month basis: 1LU solid manure storage	There is no regulation in Federation of B&H that prohibits the periodic applying of fertilizers on agricultural land during the year. There is Law on Agricultural Organic Production ("Official Gazette of FB&H" No. 72/16). Regarding the good agricultural practises there is nothing mentioned in any a valid law or bylaw related to agriculture. According to: Basic principles of good agricultural practice in the use of fertilizers, which are	In FBiH it's not adopted regulation regarding Codes of Good Agricultural practice or any other low or bylaw related to agriculture which regulates limitations of N and P in fertilizer application. Only Law on agricultural organic production ("Official Gazette of FB&H" No. 72/16) mention that plant production is considered organic	According to: Basic principles of good agricultural practice in the use of fertilizers, which are prescribed by the Rulebook on conditions, manner and methods for testing the fertility of agricultural land and determining the amount of mineral fertilizers and pesticides	No data available.	

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		The implementation of ND and harmonization with Codes of Good Agricultural practice is not finished Federation B&H: Rulebook on Determining Areas Susceptible to Eutrophication and Sensitive to Nitrates (Official Gazette of FBiH No. 71-09) Rulebook on monitoring in areas subject to eutrophication and nitrate sensitive (Official Gazette of FBiH No. 71-09).	capacity 8 m ³ , 1 LU liquid manure storage capacity 2 m ³ , and 1 LU slurry manure 10 m ³ .	prescribed by the Rulebook on conditions, manner and methods for testing the fertility of agricultural land and determining the amount of mineral fertilizers and pesticides ("Official Gazette of Republika Srpska" No. 26/14), - liquid and semi-liquid manure fertilization on all agricultural valuable areas regardless of the cover, from 1 December to March 1, - liquid and semi-liquid manure fertilization by distribution top without entering all agricultural areas, from 1. May to 1 September, - solid manure fertilization on all agricultural rails, from 1 May to 1 September, - fertilization with mineral fertilizers with nitrate nitrogen on all agricultural land, from 1 November to 1 February and the use of urea, ammonium nitrate per harvest residues, - from harvest to 1 December by fertilizing mineral fertilizers; - the use of fertilizers in areas reserved for the protection of drinking water sources is prohibited.	production under provided that in addition to the general rules of production of this law in organic plant production apply other rules and one of them emphasized that the use of mineral nitrogen fertilizers is prohibited. According to: Basic principles of good agricultural practice in the use of fertilizers, which are prescribed by the Rulebook on conditions, manner and methods for testing the fertility of agricultural land and determining the amount of mineral fertilizers and pesticides ("Official Gazette of Republika Srpska" No. 26/14), During one calendar year, an agricultural farm can fertilize agricultural areas with manure up to the following nitrogen application limit values (N): - 210 kg / ha of nitrogen (N), permitted application in the first four annual period after the initial fertility analysis was performed and - 170 kg / ha of nitrogen (N), permitted application after four annual period.		

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					first four annual period after the initial fertility analysis was performed and - 170 kg / ha of nitrogen (N), permitted application after four annual period.		
ME	No data available.						
RS	Draft version is prepared 2016 through the cooperation Project with Swedish EPA (Designation of sensitive and vulnerable zones according to the ND and UWWD - ENVAP II), but need revision, will be adopted in accordance with the new Water Law. Draft version of the Code of Good Agricultural Practice is also prepared through the ENVAPII project. It is now in the process of updating.	Legal framework for manure storage capacity is in preparation. Recommendation for storage capacity is 6 months and will be implemented via transposition of ND.	There is no regulation in Serbia which prohibits the periodic applying of fertilizers on agricultural land during the year. Traditionally, fertilizers are not applying on a frost or snow-covered land.	n/a	n/a	According to the Law on Agricultural land (2018) agricultural area with a slope greater than 10% has to be cultivated parallel to contour lines and area with a slope greater than 25% should not be used as arable land. Responsibility for implementation these restrictions is under local government.	

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RO	Ongoing.	For the first Action Program (2005 – 2008), a surface of 16,000 skm (6.7 % from the total surface) was designated as NVZ. Since December 2008, the NVZ surface increased at 137,500 skm (13,750,000 ha), which was representing 57.7 % from the total surface. Since 2013 Romania adopted whole territory approach - art 3 (5) ND. (23,839 mil. ha, 100% of the total surface). The Action Program (AP) and the Code of Good Agricultural Practices (CGAP) are reviewed every four years. The AP is mandatory at the national level. The CGAP is mandatory be applied for RD voluntary for the rest of farmers, since 2021.	Manure storage capacity will be given by the period of prohibition for the application of fertilizer/ manure to which is added one additional month.	Prohibition periods for the field application of fertilizers are defined by the time period which the crop nutrient requirements are low and the risk of leakage / runoff is high. So, in the pedo-climatic conditions of Romania, the prohibition periods for applying fertilizer and manure are calculated based on the 30 years climatic data for the time interval which the average air temperature is below 50C. The end of the prohibition period for the application of solid and liquid organic fertilizers, is when air temperature becomes higher than 50C. In this respect three are region categories with specific prohibition period as following: 1- plain, 2 - hill, 3 – mountain.	The maximum amount of nitrogen from organic fertilizers that can be applied on agricultural field must not exceed 170 Kg / ha / year. Also, in the sanitary and hydrogeological safeguard zone, the fertilizers are forbidden to be applied or handled.	The application of organic fertilizers on permanent meadows (pastures and hayfields) complies to the condition to not exceed the amount of 170 Kg N ha / year and not to apply during the prohibition periods.	AP requirements: Agriculture working soil (including sowing) on arable land with a slope greater than 12%, cultivated with weeds, is carried out along the level of curves. On lands with a slope of more than 12%, the fertilization should be done only by incorporating fertilizers into the soil (no later than 24 hours from the time of application).					
								<table border="1"> <thead> <tr> <th>Region</th> <th>Start</th> <th>End</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>15.XI</td> <td>10.III</td> </tr> <tr> <td>2</td> <td>10.XI</td> <td>20.III</td> </tr> <tr> <td>3</td> <td>05.XI</td> <td>25.III</td> </tr> </tbody> </table>	Region	Start	End	1
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1	15.XI	10.III										
2	10.XI	20.III										
3	05.XI	25.III										
BG	Ongoing revised nitrates action programme in force since 17.03.2020.	The NVZ was designated by the Order № RD-660/28.08.2019 of the Minister of Environment and Water.	The capacity of the facilities must be sufficient to store manure as follows: 1. of solid manure at least:	Do not import nitrogen fertilizers (organic and mineral / inorganic) for field crops, perennial crops, orchards, meadows and permanent pastures in the following periods:	In all crops the amount of imported nitrogen compounds from organic and mineral fertilizers during the year should not exceed	In all meadows and permanent pastures the amount of imported nitrogen compounds from organic and	On terrains with a slope of 6° to 12°, some of the following measures must be applied: 1. in arable land: Anti-erosion crop rotations, where applicable, tillage across the slope, cutting with walking formation, construction of					

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		The NVZ for the Bulgarian part of the Danube River Basin is 2,153 million ha; for the whole country NVZ is 3,835 million ha. The rules of the Code of Good Agricultural practices are obligatory within the NVZ, for the Bulgarian part of the Danube River Basin it is 2,153 million ha; for whole country is 3,835 million ha. Measure "NI_1_10 - Application of the adopted rules for good agricultural practice outside nitrate vulnerable zones" is included in the RBMP 2016-2021.	- 4 months for grazing animals, - 6 months in stable livestock farming. 2. of the liquid manure 6 months, including the period of prohibition for use of nitrogen-containing fertilizers. In the case of biogas production, the capacity of the fresh and processed manure storage facility, it is necessary to provide storage volumes for the period of prohibition, according to the capacity of the biogas production facility.	1. from November 1 to February 25 for Northern Bulgaria (municipalities and parts thereof, defined as nitrate vulnerable zones and falling in the districts: Varna, Vratsa, Veliko Tarnovo, Vidin, Gabrovo, Dobrich, Lovech Montana, Pleven, Razgrad, Ruse, Silistra, Targovishte and Shumen). 2. from 1 November to 5 February in areas with annual crops sown in autumn (autumn). 3. from November 1 to February 25 on free areas prepared for sowing and planting of agricultural crops. 4. from November 15 to February 25 when creating new orchards. Do not fertilize with nitrogen-containing fertilizers on frozen soil, as well as on soil completely or partially covered with snow. Do not apply nitrogen fertilizers during rainfall and thereafter until the soil is too wet. Do not import nitrogen fertilizers on naturally wet soils and flooded soils (except rice fields).	170 kg of nitrogen per ha/year.	mineral fertilizers during the year should not exceed 170 kg of nitrogen per ha/year	facilities for drainage or retention of surface water, introduction of soil improvers intrasoil. Belt agriculture (contour or transverse of the terrain), grass buffer belts, terracing, application of soil improvers intrasoil. 2. in perennials terracing across the slope, grassing between rows, mulching, drainage facilities, application of soil improvers intrasoil. 3. in pasture lands drainage furrows, drainage retaining shafts, introduction of soil-improving substances intra-soil is allowed. In areas with a slope greater than 12°, the application of soil improvers is prohibited.
MD	In progress.	Methodology for identification of sensitive areas was approved by GD # 736/ 2020; sensitive zones are preliminary	According to GD no. 149 of 2006, the stocking rates livestock farming are is defined for indoor and outdoor	No legal provisions, just recommendations provided in Code of GAP as follows: 1. Arable lands autumn agri-plants – 01.11-01.03	Not exceeding 170 kg N/ha/year.	This provision is not included either in regulations or new Code of GAP.	restriction of agricultural activities on slopes but just recommendations provided in Code of GAPs The optimal ratio between agricultural crops on slopes, in% Row-crop:

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	Nitrates Directive implementation status	NVZ designation method and NVZ area (ha agricultural land)	Manure storage capacity (months)	Prohibition periods for applying fertilizer and manure (months)	Limitation of N and P application		Restrictions of some agricultural activities on slopes (slope in %)
					kg/ha on agricultural land	kg/ha on grass land	
		determined, and its share in the Danube-Prut basin is around 40% of the whole territory. Yet, official designation of NZAs is to be occurred simultaneously with approval of the 2nd Danube-Prut River Basin Management Plan by the end of 2021, the latest. New Code of Good Agricultural Practice developed in accordance with European normative acts and Moldovan legislation was approved by Ministerial Order # 160/ 2020.	facilities, except pastures, as follows: 1)Cattle: indoor - from 1,5 to 5 m2 per capita with minimum 100 kg per 1,0 m2; outdoor – from 1,1 to 3,7 m2 per capita with minimum 100 kg per 0,75 m2 2)Milk caws: indoor – 6 m2 per capita; outdoor – 4,5 m2 per capita 3) Bulls: indoor – 10 m2 per capita; outdoor – 30 m2 per capita 4)Pork: indoor – from 0,8 to 7,5 (for sow) m2 per capita; outdoor – from 0,6 to 8,0 (for fattening pigs) m2 per capita Solid fraction of manure can be processed by both passive (traditional) and active (accelerated) methods. When using the passive method, the manure is placed and processed as follows: under the positive temperature it is placed in the earth beads (poultry manure is mainly stored in open anaerobic lagoons/ ponds), mixed with composting material (straw, etc.), and kept within 2-3 months.	2.Arable lands: other agri-plants – 01.10-15.03 3.Pastures – 01.10-15.03.			<10 – 50-60 1-30 – 40-50 3-50 – 30-40 5-70 – 20-25 >70 - - Dense crop: <10 – 25-30 1-30 – 30-35 3-50 – 35-45 5-70 – 45-50 >70 - 30-35 Perennial herbs: <10 – 100 1-30 – 69 3-50 – 73 5-70 – 83 >70 - 93
UA	NVZ has n't yet designated. Designation is	Manure storage is regulated by the Law about waste. According	There is no legal restriction for applying of manure. Norms of fertilizers are	Doses of fertilizers depend on soil, crop and a plant-fore	Nitrogen 80-120kg/ha, phosphorus 45-60	There exist no legal provisions for restriction of agricultural activities on slopes but just recommendations.	

Country	MEASURES						
	Nitrates Directive implementation status	NVZ designation method and NVZ area (ha agricultural land)	Manure storage capacity (months)	Prohibition periods for applying fertilizer and manure (months)	Limitation of N and P application		Restrictions of some agricultural activities on slopes (slope in %)
					kg/ha on agricultural land	kg/ha on grass land	
	expected till 2024. Methodology for NVZ designation was adopted in 2021. Draft of Good agricultural practice was developed. The adoption of the legislative act is expected at the end of 2021. Scientific bases and technology of optimum cultivation of separate cultures are developed. It is not a mandatory document just a set of recommendation.	this Law manure storage is allowed in specialized storage places, authorized in conformity with an established procedure. The large agricultural enterprises store manure both liquid and solid forms. Household manure storage are only as solid. The capacity of manure facilities must be at least 6 months. The total amount of produced manure in Ukraine was 19 772 thousand ton in 2020.	established depends on the content of N or P in soil and volumes of application of organic fertilizers. Appropriate recommendation nitrogen fertilizers are applied only in spring (if soils are sandy or sandy loam – directly before planting). 20 % of phosphorus are recommended to apply in spring and 80 % – in autumn. For NVZ nitrogen fertilizers application is regulated by the 2nd annex of the Code of Good Agricultural Practice. In Ukraine it will be named “Rules for ensuring soil fertility and the use of certain agrochemicals”. The draft Order of the Ministry of Economy has been adopted and is currently undergoing interdepartmental approval. Adoption of the Order is expected by the end of 2021. The prohibition period depends on natural zone and type of mineral fertilizer. On average, the use of mineral fertilizers is prohibited during 1st December – 1st February (or March) and 1st June – 31st August (or September). Application of organic fertilisers is prohibited from 1st June till 31 July and 15 November – 15 March for solid form and 15 November – 15 March for liquid form.	crop. Dose is defined by 3 methods: calculation, field, complex. Limitation: Nitrogen 30 - 180 kg N/ha per year, Phosphorus – 45-90 kg P/ha her year, Manure – 20-60 t/ha.	kg/ha. In year 2020 had been applied nitrogen fertilizers: Tizsa basin – 2106.7 t (189.3 kg/ha); Prut basin – 18 337.9 t in Ivano-Frankivska region (105.4 kg/ha) and 7093 t in Chernivetska region (82.1 kg/ha); Lower Danube part – 9 624 t (97.7 kg/ha) in Odeska region.	Restrictions on agricultural work on the slopes in the NVZ are contained in Annex 4 of “Rules for ensuring soil fertility and the use of certain agrochemicals”. Agricultural activities depends of slope: < 3% - cultivation of all cultures is allowed; 3–9 % - soil-protective crop rotations are applied; >9–15 % - the contour-strips organisation of territory and soil-protective crop rotations are applied; >15% - only grass is allowed. By the general estimations about 31,7 % of the lands are eroded in Ukraine. Amount of eroded lands annually increases by 80-90 thousand ha.	

Table 2: Agri-environmental measures

Country	MEASURES (situation in 2021)							
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
DE	100 % according to fertilizer ordinance (DüV). Nutrient flow balances (Stoffstrombilanz) for farms: >50 LSU or >2,5 LSU per hectare.	Germany: Whole territory: 5 m (rivers and lakes); on application of fertilisers containing N or P, the direct discharge of nutrients into surface waters has to be avoided, and the run-off into surface waters has to be prevented. Bavaria: optional with financial support of the Bavarian state: on arable land buffer stripes with a width of 7 - 30 m to the water pollution control and soil conservation. Baden-Württemberg: according to the legal obligations the riparian strip in the area outside of settlements is 10 m, where trees and shrubs must be preserved. Up to a distance of 5 m no fertilizers and pesticides may be applied, in addition, the use as arable land is prohibited there with a few exceptions.	Optional (financial support) Bavaria (Danube River Basin) 2019: ca. 148.000 ha (10,5 % of arable land); Optional (financial support) Baden-Württemberg (Danube River Basin) 2019: ca. 22.000 ha (catch crops, fallow greening, soil cultivation with strip till). German Danube River Basin: 170.000 ha.	215.900 ha in Bavaria (Danube River Basin) are managed according to the criteria of organic farming (2019) 44.169 ha in Baden-Württemberg (Danube River Basin) are managed according to the criteria of organic farming (2019). German Danube River Basin: 260.000 ha.	In Bavaria and Baden-Württemberg exist various programs funding agri-environmental measures: cultural landscape program (KULAP - Bavaria), support program for agri-environment, climate protection and animal welfare (FAKT - Baden-Württemberg) and contractual nature conservation program (VNP): Extensive grasslands: 467.600 ha. Natural landscape elements: 799 ha, in Danube River Basin in 2019 (Bavaria). Extensive grasslands: 107.700 ha in Danube River Basin in 2019 (Baden-Württemberg). German Danube River Basin: Extensive grasslands: 575.300 ha in 2019.	woodland areas increased by 1 % since 1980 without legal obligations.	No data available.	Farm advice for the protection of water and the implementation of the WFD by the offices for agriculture and forestry (ÄELF in Bavaria BY) or the county offices and Regierungspräsidien in Baden-Württemberg.
AT	Nutrient balances with obligatory documentation within the nitrates action programme (NAP) on • farm level: for all farms with >15 ha agricultural land, >2	- Whole territory: : with NAP obligatory erosion-minimizing cultivation measures on agricultural areas with average slope >10%; minimum distances for fertilizer application near surface waters in case of cultivated buffer strips	Obligatory erosion-minimizing cultivation measures on agricultural areas with average slope >10% within NAP; beyond legal requirement financial support for voluntary measures of the	669.921 ha (26%) not including alpine pastures (= 20 % of the utilised agricultural area) – are managed according to the criteria of organic farming (2019). No legal obligation.	• about 295.277 hectares of grassland (25% of permanent grassland) has been used extensively (2019) • natural landscape elements were implemented on 7.325 ha (2020).	No legal obligation; wooded area increased by 8 % since 1961; during the last years the area was almost	Rural development programme provides the basis for specific measures to enhance nature protection and	Farm advisory services are available at different regional levels and by different means: • for all farms in frame of rural development programme (based on Art. 12 of EU-Regulation 1306/2013)

Country	MEASURES (situation in 2021)						Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)		
	<p>ha vegetables or if less than 90% of agricultural area is used as grassland; documentation includes amount of nitrogen fertilizer (including manure) produced and applied, nitrogen demand of cultivated crops</p> <ul style="list-style-type: none"> field level: for farms located in communities listed in Annex 5 of NAP and with >5 ha arable land or >2 ha vegetables; documentation in addition to farm level on date, amount and field of fertilizer application, dates of sowing and harvest as well as yield; beyond legal requirements nutrient balances are an integral part of regional groundwater protection measures in frame of agri-environmental programme, participation on voluntary basis (12.414 farms (12%) with 320.146 ha (14%) in 2019). 	<p>between 2.5m and 20m depending on type of surface water (river, lake) and average slope of adjacent agricultural area (< or > 10%); beyond legal requirements buffer strips (width 12m minimum) are integral part of regional measures of agri-environmental programme, participation on voluntary basis (about 800 farms (0.8%) with 1.000 ha (2019)).</p>	<p>agri-environmental programme, i.a.:</p> <ul style="list-style-type: none"> cultivation of catch crops on at least 10% of arable area of farm (24.937 farms (23%) with 273.784 ha (12%) in 2019) permanent cultivation of catch crops on at least 85% of arable area of farm (13.294 farms (12%) with 200.230 ha (9%)) dedicated soil conservation and erosion-minimizing measures (11.137 farms (10%) with 137.469 ha (6%)) dedicated erosion prevention measures for fruit, wine and hop production (5.692 farms (5%) with 42.345 ha). 			<p>constant. 4,0 million ha woodland, 48 % of the state territory.</p>	<p>to improve ecological status of freshwaters and water retention in rural catchments; however, data on recently established wetlands is not available yet; inventory of floodplains is currently updated.</p>	<p>with consideration of regional and agricultural circumstances</p> <ul style="list-style-type: none"> chamber of agriculture provides farm advisory services on provincial level in cooperation with provincial governments participation of education and advisory services is integral part of selected measures of the agri-environmental programme.

Country	MEASURES (situation in 2021)							
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
CZ	100% keeping records on fertilizer consumption is an obligation for all farmers (base on the national legislation – using also for RDP controls) Act No. 156/1998 Coll., on fertilizers, as last amended. Since economical year 2020/2021 the calculation of nitrogen balance is obligation for farms above 30 ha, farmed in NVZ.	For reasons of soil protection from erosion and waters from pollution, wide-row crops (maize, sunflower, soya, bean, potatoes etc.) cannot be cultivated on agricultural plots with the slope above 7 degrees and in the distance less than 25 m. There are 74 815,743 ha of arable land with slope over 7 degrees nearby watercourses or water bodies. The water protection and protection against erosion is also under GAEC covered by special protection technologies. The protection activities are also implemented under AEM in RDP implemented.	Agricultural plots threatened by soil erosion must be cultivated in accordance with GAEC practice. Plots protected under ND requirements. Over 7°- 718 846,55 ha of NVZ. There are also some measures under RDP concerning the problematic of erosion in AECM. M10.1.5 Conversion of arable land to grassland 13340 ha M10.1.6 Bio – belts 4204 ha.	556 921,97 ha (29,95 % from agri area of NVZ; or 15,66 % from agri area of the whole CZ). The percentage of area overlapping reflects the geographical position of land plots designated or in organic farming evidence.	90 098,27 ha (4,8 % from agri area of NVZ for extensive grassland; or 2,53 % from agri area of the whole CZ).	In 2021, it was not possible to apply for a subsidy for the establishment of a woodland under Government Regulation 185/2015 Coll., on the conditions for granting subsidies under the afforestation of agricultural land measure. It was only possible to apply for a care subsidy for established cover and for the cessation of farming activities on commitments from previous years. In 2020, 13 applications were submitted for establishing 12,1 ha of forest cover.	Negligible in CZ Permanently waterlogged and peat land meadows – 3 284,34 ha under special management of AECM commitment.	Ministry of Agriculture www.eagri.cz Regional agencies for agriculture and countryside. The Network of Ministry of Agriculture has been built on providing necessary information to agricultural practice. Accredited consultants are taking part in regular courses and training to help farmers, not only in practical matters, crops, livestock and forestry, but today mainly related to subsidies. There is close cooperation with all researches' institutes. www.nitrate.cz , www.agroporadenstvi.cz www.vuv.cz www.vurv.cz Private sector participation.

Country	MEASURES (situation in 2021)							
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SK	At present, the calculation of nutrient balances is not obligatory for farmers.	Grassed buffer strips on arable land along water courses are not applied as systemic anti-erosion measure.	Besides the application of anti-erosion measures related to GAEC 5 and measures for row-crop cultivation on slopes over 7° on arable land in Nitrates Directive Action Plan, multifunctional bio-belts at the edge of the fields (if allocated near streams) can contribute to minimization of the soil erosion occurrence. Catch crops represent the optional component when meeting the GAEC 4 requirement, which can be achieved either winter, perennial or inter/catch crops. 40% coverage of arable land on slopes above 12° in the period from 1 November to 1 March is required. Specific numbers are not available at present.	The area under organic farming (including the conversion to OF) in December 2020 was 222896 ha (11.66% of whole UAA).	As extensive grasslands are classified those which fall into following categories: permanent grasslands in NATURA 2000, protected habitats of semi-natural and natural grasslands, and permanent grasslands within organic farming. Final area of extensive grasslands in 2020, after overlapping of respective GIS layers, is 303 883 ha. Area of natural landscape elements, which can be used for fulfilling the greening requirements, was in 2020 2654 ha.	At present it is no longer significant.	Negligible.	Pursuant to Article 14, farmers are regularly trained in the field of water protection within the meaning of the Nitrates Directive. The decisive part of these measures is provided by the Agroinstitute Nitra. In addition, these trainings are also organized by the regional offices of the Slovak Chamber of Agriculture and Food. With regard to advisory services (Article 15), the Agroinstitute Nitra also provides training for the advisors themselves. Information on the number of advisory services to farmers to help them to solve specific problems (including water issues) is not available.
HU	At the time of planning the nutrient management of agricultural areas, the volume of nutrients to be applied shall be calculated in view of the nutrient supply of the soil and the nutrient demand of the crop that is necessary for a crop yield adjusted to the conditions of the	The establishment of buffer stripes has been legislated, the implementation starts from the 1st of Jan 2012.	900 thousand hectares of arable lands are supported by Rural Development Programmes (Agri-environmental Program and Agroecology Program) between 2017-2021, where sustainable farming practices shall be applied. For example catch crop/manure/organic fertiliser must be applied at least once in 5 years in these areas and saturated soil mustn't tillage.	organic farming utilised agricultural area in 2019: 303 190 ha; percentage of total utilised agricultural area in 2019: 5,71%; agricultural producers in 2019: 5,136.	n.a.	During the period 2007/2020, the average afforestation in HU was in ha/year 2007: 18.948 2008: 7332 2009: 5168 2010: 5096; 2011: 2803; 2012: 4537; 2013: 2531;	The Rural Development Programme M4.4.2. aims to prevent water pollution, promote water retention, combat climate change challenges to improve biodiversity	Regulation 16/2079. (IV.29) AM on agricultural and rural development advisory services and the agricultural advisory system rules the operation of agricultural advisory systems in Hungary. The application of agricultural advisory service is also supported by the Rural

Country	MEASURES (situation in 2021)							
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	actual. Soil analysis in every 5 year is an important element of this assessment.					2014: 1287; 2015: 318; 2016: 158; 2017: 626; 2018: 1301; 2019: 1587; 2020: 2458;	and save water quantity and quality. Target areas: A) - Establishment and development of water facilities for territorial water retention in deep areas , B) - Establishment and development of erosion protection facilities, C) - Establishment and development of a buffer zone for coastal water protection, D) - Establishment of wetlands.	Development Programme.
SI	All farmers who use mineral fertilizers are obliged to make nutrient balances and farmers who participate in Agri- Environment Climate Measures.	Buffer stripes for Rivers 1st order 15 m of width and Rivers 2nd order 5 m of width.	The Agri Environmental Program between 2014 – 2021.	The organic utilised agricultural area in 2020 amounted to 52.078,48 ha (Republic of Slovenia Statistical Office; https://www.stat.si/StatWeb/en/News/Index/9671); data refers to the whole SI territory.		Year 2014: 23.391 ha (Dejanska raba MKGP, Kmetijsko zemljišče v zaraščanju - 1410).	Most actions (projects) for keeping existing wetlands with sustainable management, for example: ZaDravo (project 2019- 2023).	Slovenian chamber for agriculture and forestry (KGZS) organizes trainings and advisory through regional units. Farmers who apply for Agri-Environment Climate Measures must attend training.

Country	MEASURES (situation in 2021)							
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
HR	Farmers are not obliged to do the nutrient balance on their farms.	Buffer stripes are designated through 1st Action Programme and are as follows: – at 20 m distance from the outer edge of a lake bed, or other standing water, – at 3 m distance from the outer edge of water course beds having a width of 5 meters or more, – on slanted terrains along the water courses, having a slope greater than 10% within a distance of less than 10 m from the outer edge of the water course bed. Buffer stripes are also obligatory GAEC 1 according to the Ordinance on Cross compliance.	Problems with soil erosion should be settled through minimal soil cover. On agricultural parcels with slopes of 15% or more, ploughing should be performed only perpendicular to the slope. All GAEC standards prescribed in Ordinance are obligatory for farmers in use of direct payments in Croatia.	In 2013 there were 1609 agricultural producers doing organic production on 3,12% of agricultural land in Croatia.		Ministry of Agriculture does not collect data on afforestation of agricultural land.	In 2012, there is 74.000 ha of wetlands and this number is slightly increased (+2.000 ha) from 1990.	The Agricultural Advisory Service in Croatia employs 239 employees, mostly Agricultural Engineers. It has offices in each Croatian county and Zagreb.
BA		According to Water Law of Federation B&H (an erosion-prone area is an area permanently or temporarily subject to the impact of surface, deep or lateral water erosion, and which is: 1. the source of floods (erosion focus), 2. under the influence of torrents, 3. made up of soil subject to piping, 4. under the influence of sea waves. In FBiH According to Water Law: The scope of protection from harmful	No data.	No valuable data. (till the date of filling in this table).	No data.	No data regarding afforestation of agricultural land.	There is no organized establishment of new or revitalization of old wetlands in Republika Srpska.	No data.

Country	MEASURES (situation in 2021)						
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)
		<p>effects of waters and the necessary measures shall be defined by the following plans: special flood and ice protection plans, erosion protection plans and extraordinary water pollution protection plans. The Federation Government (Ministry of agriculture, forestry and agriculture) shall, on proposal by the Federal Minister, adopt a regulation on the types and contents of the plans referred to the previously mentioned.</p> <p>In BA RS: According to Water Law: The Ministry of agriculture, forestry and agriculture implements measures and actions on the preparation of documentation determining erosive areas, with types of erosion, intensity and other characteristics.</p> <p>According to Agricultural Land Law:: protection of agricultural land from the harmful effects of erosion and torrents, anti-erosion measures are taken in the erosive area are:</p> <p>(1) Anti-erosion measures in terms of this Law are:</p> <p>a) temporary or permanent ban on plowing meadows and pastures and</p>					

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		other areas for their conversion into arable land with annuals crop; b) introduction of crop rotation, c) cultivation of perennial plantations, g) construction of specific buildings, d) method of land cultivation, f) raising and cultivating field protective forest belts or planting perennial woody plants, e) prohibition of grazing livestock for a certain period of time or limitation of the number throats that can be released on certain surfaces, h) prohibition of felling of forests and forest plantations above endangered plots z) and other measures.						
ME				No data available.				
RS	About 150 farmers (who owns at the most 50 000 ha and 18 to 1000 cows) went through training for nutrient balances implementation. The number of farmers who went through the training is	Measures against erosion are organised locally. Buffer strips are not regulated by law.	Technical measures against erosion are applied on ~ 160000 ha/year and biological measures on ~120000 ha/year. Due to extremely developed erosion, every biological work was done simultaneously with the technical work and administrative measures against erosion are applied on ¼ of Serbian territory.	Area of organic production covers 17.779,35 ha.		Wooded area (Stat. Office of RS, 2017) 2.237.511 ha - 29% of the territory of RS, 2014- 28%.	There is no organized establishment of new, or revitalization of old wetlands in Serbia.	In accordance with the Low on the performance of advisory and professional work in the field of agriculture (OG.RS 30/10) agricultural advisory and extension services are organised in 34 municipalities.

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	presented in pro mille.							
RO	Romanian farmers have obligations related to implementation of the nutrient balances only in certain conditions, as using irrigation system or if farmers apply chemical fertilizers above fertilizing average quantities, according to the Management Plan for fertilizer at farm level. There are not available data about the % of farmers to do the nutrient balances.	No additional agri-environment measures against erosion (buffer stripes), but there are in force mandatory measures under Nitrate Directive - AP requires additional buffer strips besides the ones stipulated in Romanian Water Law 107/1996 with further amendments (where the buffer strips must have a width between 2 m to 50 m, depending by the width of water courses, type and use of water resources or hydrotechnical works). The additional buffer strips must have a width: a) 3 m for land with slope < 12%; b) 5 m for land with slope > 12%.	Applied being considered an important measure for prevention of soil erosion. In 2020 the surface of reclaimed land with technical works for erosion control was 158,869 ha, representing around 1.2% of arable land (source: Ministry of Agriculture and Rural Development). This measure is also found in Action Plan: - covering the sloping lands with agricultural crops during the winter period; - maintaining a minimum amount of vegetation to cover the land during rainy, snowy or frosty periods.	In 2021, the area of organic production covered 484719 ha, representing over 3% of the agricultural area (source: Ministry of Agriculture and Rural Development).	In 2021 the surface with extensive grasslands, natural landscape elements was 750513 ha, representing over 5% of the of the agricultural area (source: Ministry of Agriculture and Rural Development). These represent the surfaces with commitments for agri-environmental for extensive grassland management under EU financing National Programme for Rural Development – Pilar II CAP (grasslands with high natural value, important grasslands for birds and butterflies, important agriculture land as feeding areas for the Lesser Spotted Eagle (Aquila Pomarina) and bustard (Otis Tarda).	According to the data of Ministry of Agriculture and Rural Development the afforestation has registered a slight increasing less than 1% (2013-2019).	There are measures and studies proposed in the Program of Measures of the updated River Basin Management Plan, which were implemented particularly in the second and will continue to be implemented in the third planning cycle. Project Danube Floodplain areas – 102549 ha (Danube flood plains with the reconnection potential). Flood Risk Management Plan, and RBMP measures – 3600 ha (natural water retention measures - wetlands).	Ministry of Agriculture and Rural Development trained 5235 persons in the topic of implementation of agri-environment obligations. Number of farmers trained by knowledge and training providers on Code of Good Agricultural Practices (male/female disaggregated) - 6057 farmers received a one-day training. Out of them 4181 farmers received a second one-day training. 280 discussions groups were set-up, supported by 180 champion farmers and 50 communal platforms hosting manure management good practices and demonstrations.
BG	Statutory management	The National Standards for Good Agricultural and	National standard 5. To limit the erosion of sloping areas:	The total areas on which the methods of organic production	Area of extensive grasslands in 2020, is	The total area of forests and	Project Danube Floodplain	Activity of the National Agricultural Advisory

Country	MEASURES (situation in 2021)							
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
	<p>requirement (SMR) 1 includes the obligations of farmers in accordance with the Program of measures to limit and prevent pollution with nitrates from agricultural sources in vulnerable areas according to Order № RD 09-222 / 27.02.2020 of the Minister of Agriculture, Food and Forestry and Order № RD -237 / 17.03.2020 of the Minister of Environment and Water. SMR 1 applies to holdings and agricultural activities within nitrate vulnerable zones. In order to avoid the risk of excess nitrates in plants and soil, fertilization recommendations shall be made on the basis of a balance between the amount of nitrogen required for crop development and the nitrogen that can be supplied to crops from the soil and by fertilization, taking into account :</p>	<p>Environmental Condition (GAEC) of the land are mandatory for implementation by all farmers, owners and / or users of agricultural land who are beneficiaries of: - direct payments; - the following measures from the Rural Development Program (2014-2020): Agri-environment and climate; Organic farming; Payments under NATURA 2000 and the Water Framework Directive; Payments for areas with natural or other specific constraints. National standard 1. It is prohibited to use mineral and organic nitrogen fertilizers in the buffer strips: - with a width of at least 5 meters on flat areas, along surface water bodies (rivers, streams, canals, lakes, dams, sea), except for rice cells; - with a width of at least 10 meters on flat areas when fertilizing with a liquid fraction of manure; - with a width of at least 10 meters when fertilizing areas with a slope; - with a width of at least 50 meters when fertilizing areas with a sharp slope.</p>	<p>- for arable land - tillage is carried out perpendicular to the slope or horizontally; - for permanent crops - strengthening of the inter-rows by partial / complete grassing, or sowing / planting with other crops, and / or the tillage is carried out perpendicular to the slope or horizontally.</p>	<p>are applied (areas in transition and organic areas) in 2019 amount to 226 thousand ha - by 39.2% more than in 2018. Their share in the total utilized agricultural area in the country reached 4.5%, compared to 3.2% in the previous year. (source: Ministry of Agriculture and Rural Development, Agricultural Report 2020).</p>	<p>143095 ha. Area of natural landscape elements after overlapping of respective GIS layers, was in 2020 3966 ha.</p>	<p>forest territories as of 31.12.2020 is 4,270,995 ha, of which afforested area 3,919,888 ha. The area of the forest territories is 3 952575 ha (92.54%). The area of agricultural territories with the characteristics of a forest within the meaning of Article 2 of the Forest Act (“forests on agricultural territories”) is 318,420 ha (7.46%). As the way of reporting the areas in 2019 and 2020 is different, for comparability of the data the analysis is made on the basis of the total area (forest and agricultural territory).</p>	<p>areas – 24738 ha (BG part of Danube flood plains with the reconnection potential) and 12219 ha (Yantra River flood plains with the reconnection potential).</p>	<p>Service NAAS under measure 2 “Consulting services, farm management services and farm replacement services” of the RDP 2014 - 2020 According to sub-measure 2.1.2. The NAAS provides free of charge to small farms six main advisory packages, contributing both to the economic development of small farms through modernization and technological renewal, and to improving environmental protection and combating climate change. The total number of submitted applications for receiving a consulting package under sub-measure 2.1.2 in 2019 is 2,470.</p>

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	<p>- the amount of nitrogen contained in the soil before planting / sowing;</p> <p>- the amounts of nitrogen coming from the mineralization of the organic matter;</p> <p>- imported in the soil nitrogen compounds from organic fertilizers;</p> <p>- imported in the soil nitrogen compounds from mineral fertilizers.</p> <p>Nitrogen fertilization rates are determined after performing agrochemical analysis of the soil and analysis of organic fertilizer, using software to calculate the nitrogen balance.</p>					<p>- The total area (forest and agricultural territory) has increased by 6665 ha - from 4264330 ha to 4270995 ha. This increase is mainly due to the development of previously undeveloped areas occupied by forests in the inventories for the year. The area of the forest territories has decreased by 196776 ha - from 4149351 ha to 3952575 ha. The area of forests on agricultural territories has increased by 203441 ha - from 114979 ha to 318420 ha.</p> <p>Source: Annual Report for 2020 of the</p>		

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	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
MD	There exist no legal provisions to keep the Nutrient Balance by farmers.	From 2009 till 2012, area under forest protection strips has decreased by 3%. In August 2014, GoM ratified Program for Soil Fertility Improvement and Increase 2011-2020 which stipulates applying of mitigation measures against erosion. In January 2014, GoM approved National Plan on extending the forest vegetation areas for 2014-2018. The proposed measures provide for afforestation of the degraded lands, the strips for the protection of rivers and water basins, as well as the strips for protection of farmlands over an area of at least 13,000 hectares. The national plan also aims at protecting the soil against erosion and improving the water balance. The estimated cost of the actions envisaged in the plan amounts to about 295 million lei, with the money earmarked from the state budget, National	Systems are being applied, but precise data are unavailable. Estimate data 433000 ha of arable land in the MD part of the Put River basin).	Inn 2006, the organically farmed area amounted from 11000 to 12.392 hectares. By 2015, area under organic farming has to increased up to 31.100 ha. The production volume shall be increased to about 75.000 tons (mainly, wine, sunflower oil, walnuts, lavender oil, honey, and dried and frozen fruits) – these data were provided by three certification bodies.		Executive Forest Agency, Ministry of Agriculture, Food and Forestry. A total of 592,3 ha of afforestation of agricultural land for the period 2007-2012 was realized within the Bulgarian part of the Danube River District. According to the annual report of the Executive Forest Agency for 2013 the total area of the forest territories for the whole county has increased with 16 706 ha in 2013 compared to 2012. Afforested area increased with 15 788 ha in 2013	Ca. 200 ha (Middle & Low Prut).	Agricultural extension services are well developed through a network of non-state institutions, private companies, technical assistance projects, and farmer organizations. The foundations for the extension system are offered by the non-governmental organization National Rural Development Agency (ACSA), which includes a network of 35 Regional Centres Service Providers, 425 consultants (350 local, and 75 regional). On an annual basis, the network provides over 250 thousand advisory services, including around 3500 seminars and training programs, approximately 3000 written recommendations, 2500 round tables and meetings, over 45 thousand on-site visits and approximately 200 thousand individual

Country	MEASURES (situation in 2021)							
	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
		Ecological Fund and external donations.				compared to 2012.		consultations. From 2010 till 2014, total number of trained farmers is ca. 4000 (all MD).
UA	There exist no legal provisions to keep the Nutrient Balance. According to the "Rules for ensuring soil fertility and the use of certain agrochemicals" for the nutrient management in the NVZ the volume of nutrients to be applied shall be calculated in view of the nutrient supply of the soil and the nutrient demand of the crop that is necessary for a crop yield adjusted to the conditions of the actual. Soil analysis in every 5 year is an important element of this assessment.	According the Item 87 of the Water Code buffer stripes for small rivers are 2.5 m of width, for middle rivers– 50 m, for big rivers – 100 m. On slopes the width of buffer strips doubles. Other measures against erosion: crop rotation, crop nutrient management with soil testing, the use of organic fertilizer, avoiding of deep ploughing, contour ploughing, strip cropping, livestock grazing practices, etc.	Environment-friendly practices which included erosion-minimizing cultivation system (crop rotation, crop nutrient management with soil testing, the use of organic fertilizer, avoiding of deep ploughing, contour ploughing, strip cropping.) are stimulated by State (financial support).	According to various estimates the organically farmed area amounted 280 000 hectares. The Law on organic manufacture is accepted on 21 April 2011. Besides, the Law about safety and quality of food operates in the country. The Government Programme on development of organic farming is accepted. According to the monitoring conducted by the Ministry of Economy, in 2019 the total area of agricultural land with organic status and transition period amounted to 467,980 ha (1.1% of the total area of agricultural land in Ukraine). At the same time, there were 617 operators of the organic market, 470 of them were agricultural producers. According to the International Independent Scientific Research Institute of Organic Agriculture (FiBL), in 2017 Ukraine ranks eleventh in Europe over the total area of agricultural land certified as organic. Certification bodies have been created with the help of Switzerland. A new program "Organic Trade for Development in Eastern Europe" (OT4D) was launched		Forestation area: 2016: 63 231; 2017: 64 713; 2018: 51 519 2019: 48 837; 2020: 44 798. Including forest planting and sowing: 2016: 2 783; 2017: 2 072; 2018: 2 239 2019: 2 180; 2020: 2 272.	Black Sea region of Ukraine has 600 thousand ha of wetlands. One has the status of the international importance (Danube plavni). Programs of rehabilitated systems in Lower Danube (irelands Tatarin, Ermakov, lakes Katlabukh, Saf'yany) are ongoing in cooperation with Wild World Fund. About 12 000 ha (33 objects) will be restored at performance of the Tizsa RBMP.	The Low on Farm Advice activity has been adopted on 17.06.2004, some changes have been brought in 2010. The three-level system of advisory services is created. Public National association of Advisory services has been registered: www.dorada.org.ua. Agricultural extension services are well developed through a network of non-state institutions, private companies, technical assistance projects, and farmer organizations. The foundations for the extension system were established with the technical assistance of a number of the European countries. In Tizsa basin (Zakarpatska region) operate 3 Regional Centres, in Prut basin - 7 Regional Centres, in Lower Danube part – 2 Regional Centres.

MEASURES (situation in 2021)								
Country	Nutrient Balances (% of farmers obliged to do the nutrient balances)	Measures against erosion: buffer stripes (river in km, m of width)	Erosion-minimizing cultivation systems and catch crops (ha of arable land)	Area with organic production (ha)	Extensive grasslands, natural landscape elements (ha)	Afforestation of agricultural land (ha)	Establishment of wetlands (ha of new wetlands or rehabilitated ones)	On Farm Advice/Extension Services (no of farmers trained)
				in 2021 with the support of the Swiss State Secretariat for Economic Affairs (SECO).				

Table 3: Indicators for measure implementation

Country	Nitrates Directive Nitrate Vulnerable Zones*		Common Agricultural Policy* cross-compliance			Common Agricultural Policy* agri-environmental measures			Remarks
	2006	2021	Determined area for direct support in 2006	Determined area for direct support in 2021	Direct payments in the period of 2006-2021	Area with Rural Development Programme support for agri-environmental measures in 2006	Area with Rural Development Programme support for agri-environmental measures in 2021	Rural Development Programme payments*** for agri-environmental measures in the period of 2006-2021	
	% of total area**	% of total area**	% of total utilised agricultural area	% of total utilised agricultural area	EUR	% of total utilised agricultural area	% of total utilised agricultural area	EUR	
DE	100.0	100.0	100.0	100.0	BW: 1,450,000,000 BY: 11,200,000,000 German DRB: 12,650,000,000	69.0	70.0	651,000,000	*Estimated costs from 2010 - 2021
AT	100.0	100.0	73.0	86.6	9,854,746,000	94.2	80.4	6,986,222,000	2006 and 2019 respectively; total payments for period 2006-2019
CZ	39.9	42.0	99.5	99.49	10,658,370,000	34.4	27.3	1,710,640,571	Direct payments – These are national ceilings for two periods i.e. 2007 - 2013 and 2014 - 2020
SK	75.4 (% of UUA)	62.2 (% of UUA)	95.5	96.0	5,640,330,000	19.7	14.5	381,613,739	NVZ = % of total UAA in 2020; all payments are to 2020. Only measures corresponding with Art. 28, 29, 30 (of RDP 2014-2020) or relevant measures in RDP 2004-2006 (Agri-environment and animal welfare), and RDP 207-2013 (Axis II without LFAs) are considered
HU	47.0	70.0	86.1	90.2	15,945,995,200	23.4	12.4	2,372,219,618	2006 and 2021
SI	100.0	100.0	92.2	96.2	2,023,512,710	44.0	20.00	447,965,672	Data refer to whole Slovenia. Data on % of total utilised agricultural area: year 2020. Data on direct payments: time period 2006 – 2020. Data on agri-environmental measures: time period 2007-2020

Country	Nitrates Directive Nitrate Vulnerable Zones*		Common Agricultural Policy* cross-compliance			Common Agricultural Policy* agri-environmental measures			Remarks
	2006	2021	Determined area for direct support in 2006	Determined area for direct support in 2021	Direct payments in the period of 2006-2021	Area with Rural Development Programme support for agri-environmental measures in 2006	Area with Rural Development Programme support for agri-environmental measures in 2021	Rural Development Programme*** for agri-environmental measures in the period of 2006-2021	
	% of total area**	% of total area**	% of total utilised agricultural area	% of total utilised agricultural area	EUR	% of total utilised agricultural area	% of total utilised agricultural area	EUR	
HR		9.0		38.1	1,193,734,129		20.3	234,567,680	Croatia is an EU member since July 2013
BA									No data available
ME									No data available
RS	0.0	0.0	0.0	0.0		0.0	0.0		Not relevant
RO	6.7	100.0	0	64.1	14,142,793,381	0	9.5	3,154,230,699	Payments for period 2006-2021, 2021 direct payments are not complete (partially – July situation); agri-environment payments do not include the amount that it is planned in 2021 under mechanism for recovery and resilience
BG	36.1% (of the area of the whole country)	34.6% (of the area of the whole country)	74.4	76.1	6,483,190,076	11.6	29.2	1,888,565,982	Total payments for period 2007-2020
MD	0.0	0.0	0.0	0.0	0	0.0	2.1	925,000	
UA	0.0	0.0	0.0	0.0	0	0.0	0.0	0	The Nitrates Directive is now in the process of implementation. Methodology for NVZ delineation and the Best Agricultural Practice have already developed
Basin	31	63	44	69	78,592,671,497	19	22	17,827,950,962	

* or similar national mechanism

** if the whole territory approach is applied, use 100%

*** e.g. investments (art.17), agri-environment-climate operations (art. 28), organic farming (art. 29), Water Framework Directive payments (art. 30), advisory services (art. 15), knowledge transfer and information (art. 14), or cooperation actions (art. 35), LEADER local action groups (art. 42)