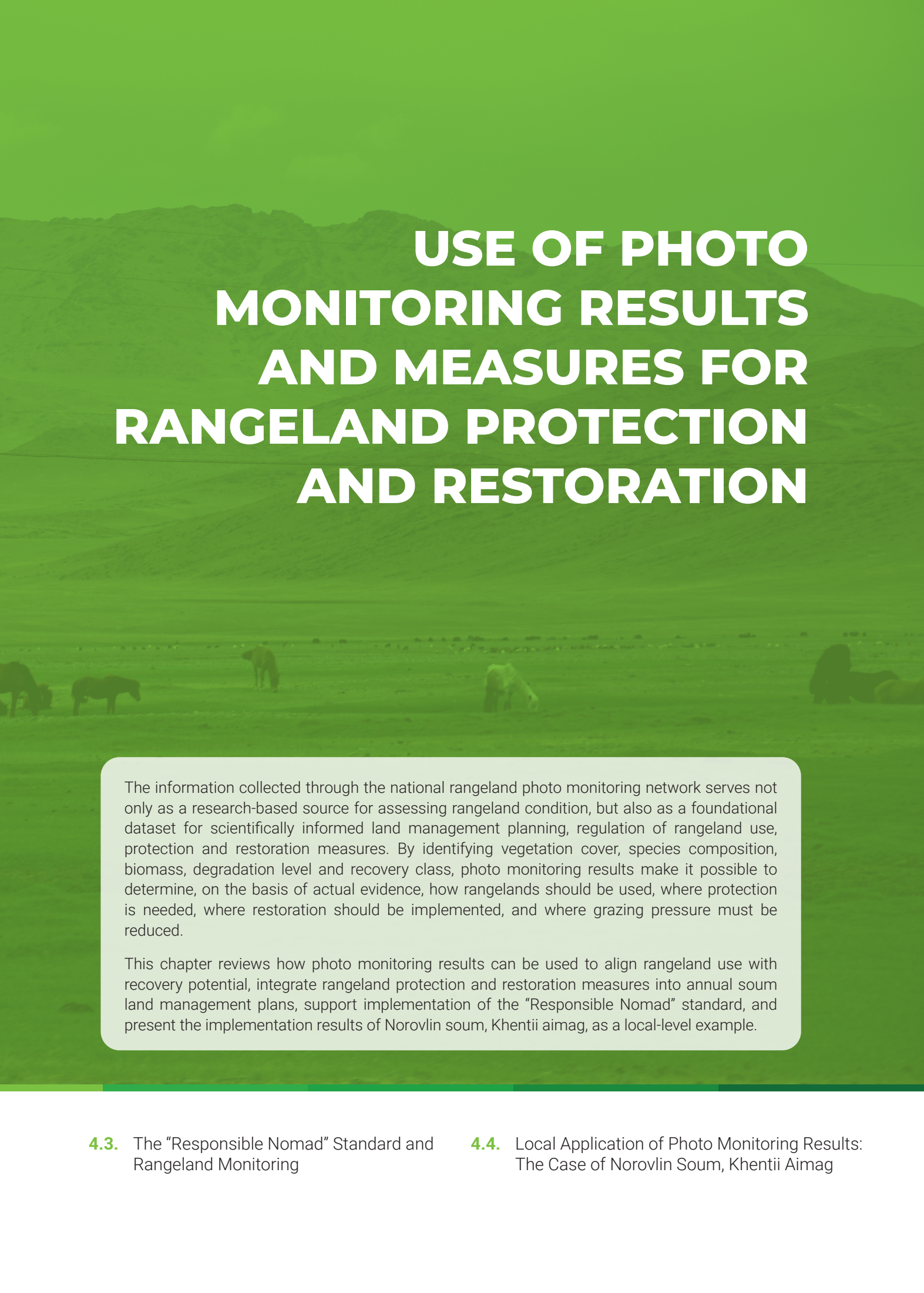




**4.1.** Principles for Aligning Rangeland Use with Recovery Class

**4.2.** Use of Photo Monitoring Results in Land Management Planning



# USE OF PHOTO MONITORING RESULTS AND MEASURES FOR RANGELAND PROTECTION AND RESTORATION

The information collected through the national rangeland photo monitoring network serves not only as a research-based source for assessing rangeland condition, but also as a foundational dataset for scientifically informed land management planning, regulation of rangeland use, protection and restoration measures. By identifying vegetation cover, species composition, biomass, degradation level and recovery class, photo monitoring results make it possible to determine, on the basis of actual evidence, how rangelands should be used, where protection is needed, where restoration should be implemented, and where grazing pressure must be reduced.

This chapter reviews how photo monitoring results can be used to align rangeland use with recovery potential, integrate rangeland protection and restoration measures into annual soum land management plans, support implementation of the “Responsible Nomad” standard, and present the implementation results of Norovlin soum, Khentii aimag, as a local-level example.

## **4.3.** The “Responsible Nomad” Standard and Rangeland Monitoring

## **4.4.** Local Application of Photo Monitoring Results: The Case of Norovlin Soum, Khentii Aimag

## 4.1.

# PRINCIPLES FOR ALIGNING RANGELAND USE WITH RECOVERY CLASS

Rangeland condition and recovery potential are key indicators for regulating land use. Rangeland vegetation productivity, forage resources, soil protection, watershed stability and the risks associated with livestock production are directly linked to grazing pressure, duration of use and seasonal rotation. Therefore, aligning rangeland use with the recovery potential of each area, based on photo monitoring results, is an important condition for preventing rangeland degradation, restoring degraded areas and ensuring the sustainability of livestock production.

For Class I rangelands, it is important to ensure that grazing pressure does not exceed the available carrying capacity in order to maintain the natural reference condition. For Class II rangelands, recovery should be supported by reducing use pressure and introducing short-term seasonal rotation. For Class III rangelands, where noticeable changes have occurred in vegetation structure, composition and productivity, it is necessary to adjust the use regime and apply resting, rotation and protection measures for a defined period. For Class IV rangelands, which show signs of strong degradation, grazing pressure should be substantially reduced, and measures such as resting, fencing or protection, and support for soil and vegetation recovery should be implemented. Class V rangelands are very strongly changed, with limited potential for short-term natural recovery, and therefore require special restoration measures, long-term protection and temporary exclusion from use.

Therefore, the following principles should be followed when planning rangeland use:

**First**, rangeland carrying capacity should be calculated not only in relation to livestock numbers, but also in connection with the recovery potential, vegetation productivity and seasonal characteristics of the area.

**Second**, restoration and protection measures for Class III–V rangelands must be included in the annual soum land management plan.

**Third**, seasonal grazing schedules, mobility, resting periods, water supply and fencing measures should be linked to photo monitoring results.

**Fourth**, a system should be established to monitor annual changes in rangeland condition and to evaluate the results of planning and implementation.



*Rangelands that have undergone significant alteration possess a restricted ability to naturally recuperate in a brief timeframe, necessitating specific restoration efforts, prolonged protection, and temporary withdrawal from utilization.*

**TABLE 10.** Recommendations for Aligning Rangeland Use with Recovery Class

| RECOVERY CLASS I:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| In order to maintain the current healthy condition of the rangeland, grazing pressure should be adjusted so that it does not exceed the available carrying capacity of the rangeland.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| RECOVERY CLASS II:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| With the main objective of improving the current condition to a healthy state, the level and intensity of use should be managed at 5 per cent below the available carrying capacity based on the rangeland's recovery potential. This level of use may be revised and increased once the objective of restoring the rangeland to a healthy condition has been achieved. Recovery and improvement of the rangeland can be accelerated by introducing short-term seasonal rotation and adjusting the duration of use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| RECOVERY CLASS III:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| With the main objective of improving the degraded and changed condition of the rangeland to a healthy state, the level and intensity of use should be managed at 10 per cent below the available carrying capacity based on the rangeland's recovery potential. Introducing short-term rotation into the current seasonal use regime is likely to be more effective. Appropriate duration and location of use should be determined annually for each seasonal rangeland through planning, and these arrangements should be differentiated according to the specific characteristics of the rangelands used by each herder group. For example, the eastern part of a winter or spring rangeland may be used during the first half of the first year, after which use shifts to the western part for the remaining period. In the following year, this two-paddock rotation model would be reversed, meaning that the western part is used during the first half of the period and the eastern part during the remaining period. This adjustment of the grazing regime should be maintained without change for at least seven years, or until the rangeland recovers and shifts to a healthy condition. Once the rangeland has improved and reached the healthy condition, grazing pressure may be revised and increased.                                    |
| RECOVERY CLASS IV:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| The main approach to improving strongly degraded rangelands and increasing their productivity and quality is to combine reduced grazing pressure with exclusion from livestock use during the growing season. Grazing pressure should be adjusted to 15 per cent below the available carrying capacity based on recovery potential, while the area should be fully excluded from use during the growing season for three consecutive years. In other words, the rangeland should be completely free from livestock grazing from the emergence of spring growth until plant senescence. During the dormant, non-growing period, it may be used at a grazing pressure reduced by 15 per cent below the available carrying capacity. After the first three consecutive years of full exclusion during the growing season, the area may be used for two consecutive growing seasons at 15 per cent below the available carrying capacity, followed again by three years of exclusion and then two consecutive years of use during the growing season. This management regime should be implemented for at least 10 years and continued until the rangeland improves and shifts to the healthy or target condition. Once recovery has been achieved, the rangelands may be used at a stocking level aligned with the recovery-potential-based carrying capacity |
| RECOVERY CLASS V:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| At this condition level, the main objective is to slow soil erosion and degradation and support stabilization of soil and vegetation cover. This can be achieved through a combination of long- and short-term exclusion from use and adjustment of grazing pressure to 15 per cent below the recovery-potential-based carrying capacity. During the first two years, the rangeland should be completely excluded from use. Beginning from the second year of exclusion, it should then be kept free from livestock grazing during the growing season for three consecutive years. During the dormant or non-growing period, such rangelands may be used at a grazing pressure 15 per cent below the recovery-potential-based carrying capacity. After the first three years of growing-season exclusion, the rangeland may be used during the growing season for the following two years at 15 per cent below the available carrying capacity, followed again by three years of exclusion and then two consecutive years of growing-season use. This long-term model of appropriate use should be continued for at least three cycles of growing-season exclusion.                                                                                                                                                                                        |

## 4.2.

# USE OF PHOTO MONITORING RESULTS IN LAND MANAGEMENT PLANNING

Photo monitoring data provide the basis for incorporating rangeland protection and restoration measures into the annual land management plans of soums and districts. Rangeland condition assessments make it possible to identify areas with high degradation risk, areas classified under Recovery Classes III–V, areas with high livestock concentration, degraded areas around water points, and areas where seasonal grazing arrangements have been disrupted. Based on this information, appropriate protection and restoration measures can be planned.

Annual soum land management plans include and implement measures such as resting rangelands, rotational use, fencing and protection, control of harmful rodents, protection of water sources and riparian areas, afforestation and restoration, and regulation of use in areas heavily affected by livestock trampling. These measures should be assessed not only by the size of the area covered, but also by whether the condition of the land is changing. Therefore, photo monitoring results should be linked to land management plans in the following ways.

**FIRST**, areas should be differentiated into categories such as areas where normal use can continue, areas where grazing pressure needs to be reduced, areas that require seasonal resting, and areas that require restoration or special protection. Such differentiated planning ensures that all rangeland resources are not used according to a single uniform principle, but are managed according to their condition, pressure and recovery potential.

**SECOND**, baseline monitoring indicators should be included in rangeland use agreements and annexes to soum land management plans. These should clearly specify the initial condition of the area, changes observed in the previous year, medium-term trends, measures to be implemented, the timing of the next assessment, and expected results. In this way, a rangeland use agreement can become not merely a document with general objectives, but a measurable management tool with a clear basis for accountability.

**THIRD,** rather than directly applying aggregated national- or aimag-level assessments, land managers need to interpret the results in relation to local conditions at the soum, bag and seasonal rangeland levels. More realistic decisions can be made when photo monitoring results are assessed together with herders' observations, land officers' records, water supply information, livestock numbers and seasonal grazing pressure data.

**FOURTH,** land managers should integrate digital platforms, databases and mobile applications into their daily work and establish a consistent flow of information from planning to reporting. For example, protection, grazing pressure reduction and restoration measures included in the plan should be compared against monitoring results from the following season or year. This would help institutionalize a regular cycle of planning, implementation, monitoring and improvement.

**FIFTH,** explaining and presenting rangeland maps and monitoring results during discussions with herders and at the bag level should become an integral part of land management activities. If information is communicated clearly to stakeholders during the planning stage, implementation, acceptance of decisions and shared responsibility will improve.

The "Methodology for the General Land Management Plan of Aimags and the Capital City" and the "Methodology for the Soum Territorial Development Plan" are being applied in operations. These methodologies create the conditions to support national, regional and local development policies and planning documents through land resource planning; to plan economically efficient and environmentally sound integrated measures; and to ensure equal rights to land use that are accessible to citizens and the public. Within the framework of these methodologies, the following measures for protecting rangeland areas, improving their condition and restoring degraded rangelands are being planned and implemented.



*Photo monitoring data provide the basis for including rangeland protection and restoration measures in annual soum and district land management plans.*



**TABLE 11.** Summary of the Rangeland Protection and Restoration Measures Planned in the Annual Land Management Plans of Sours, the Capital City and Districts for 2020–2026

| No.   | Type of measure                                                                                                               | Total for 2020–2026                |                    |                            |                                    |                    |      |
|-------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------|----------------------------|------------------------------------|--------------------|------|
|       |                                                                                                                               | Total planned land parcels / units | Implementation     |                            | Total planned land parcels / units | 2020               |      |
|       |                                                                                                                               |                                    | Land parcel / unit | National implementation, % |                                    | Land parcel / unit | %    |
| 1     | Rangelands to be excluded from use                                                                                            | 36                                 | 36                 | 100%                       | 7                                  | 7                  | 100% |
| 2     | Expansion of grazing use                                                                                                      | 13                                 | 9                  | 69%                        | 2                                  | 2                  | 100% |
| 3     | Implementation of integrated measures to protect and restore rangelands                                                       | 135                                | 89                 | 66%                        | 23                                 | 21                 | 91%  |
| 4     | Adjustment of livestock numbers to rangeland carrying capacity                                                                | 31                                 | 24                 | 77%                        | 3                                  | 3                  | 100% |
| 5     | Rangelands requiring rest                                                                                                     | 406                                | 319                | 79%                        | 76                                 | 74                 | 97%  |
| 6     | Rangelands recommended for rotational use                                                                                     | 787                                | 607                | 77%                        | 199                                | 183                | 92%  |
| 7     | Rangelands recommended for restorative grazing                                                                                | 311                                | 168                | 54%                        | 69                                 | 56                 | 81%  |
| 8     | Areas where grazing use is recommended to be expanded through the establishment of ponds, dams and other water infrastructure | 3                                  | 3                  | 100%                       |                                    |                    |      |
| 9     | Areas requiring rodent management                                                                                             | 1770                               | 1276               | 72%                        | 809                                | 760                | 94%  |
| 10    | Areas where traditional water points should be established                                                                    | 53                                 | 12                 | 23%                        | 2                                  | 0                  | 0%   |
| 11    | Rangelands where repair of existing water points is recommended                                                               | 194                                | 126                | 65%                        | 15                                 | 9                  | 60%  |
| 12    | Rangelands where new water points are needed                                                                                  | 827                                | 347                | 42%                        | 102                                | 49                 | 48%  |
| Total |                                                                                                                               | 4566                               | 3016               | 66%                        | 1307                               | 1164               | 89%  |

| Of which                           |      |                                    |                    |      |                                    |                    |      |                                    |                    |      |                                    |                    |      |                                    |                |
|------------------------------------|------|------------------------------------|--------------------|------|------------------------------------|--------------------|------|------------------------------------|--------------------|------|------------------------------------|--------------------|------|------------------------------------|----------------|
| 2021                               |      | Total planned land parcels / units | 2022               |      | Total planned land parcels / units | 2023               |      | Total planned land parcels / units | 2024               |      | Total planned land parcels / units | 2025               |      | 2026                               |                |
| Total planned land parcels / units | %    |                                    | Land parcel / unit | %    |                                    | Land parcel / unit | %    |                                    | Land parcel / unit | %    |                                    | Land parcel / unit | %    | Total planned land parcels / units | Implementation |
| 6                                  | 100% | 1                                  | 1                  | 100% | 3                                  | 3                  | 100% | 16                                 | 16                 | 100% | 3                                  | 3                  | 100% |                                    |                |
| 2                                  | 100% | 1                                  | 1                  | 100% |                                    |                    |      | 2                                  | 2                  | 100% | 2                                  | 2                  | 100% | 4                                  | 0              |
| 4                                  | 50%  | 3                                  | 2                  | 67%  | 38                                 | 31                 | 82%  | 13                                 | 12                 | 92%  | 25                                 | 19                 | 76%  | 25                                 | 0              |
| 2                                  | 100% | 2                                  | 2                  | 100% |                                    |                    |      | 4                                  | 4                  | 100% | 13                                 | 13                 | 100% | 7                                  | 0              |
| 53                                 | 87%  | 50                                 | 44                 | 88%  | 54                                 | 49                 | 91%  | 70                                 | 62                 | 89%  | 47                                 | 37                 | 79%  | 48                                 | 0              |
| 164                                | 99%  | 95                                 | 60                 | 63%  | 93                                 | 65                 | 70%  | 96                                 | 79                 | 82%  | 71                                 | 56                 | 79%  | 67                                 | 0              |
| 30                                 | 83%  | 52                                 | 14                 | 27%  | 81                                 | 37                 | 46%  | 24                                 | 21                 | 88%  | 24                                 | 10                 | 42%  | 25                                 | 0              |
|                                    |      | 1                                  | 1                  | 100% |                                    |                    |      |                                    |                    |      | 2                                  | 2                  | 100% |                                    |                |
| 99                                 | 63%  | 119                                | 66                 | 55%  | 182                                | 137                | 75%  | 188                                | 108                | 57%  | 152                                | 106                | 70%  | 164                                | 0              |
| 1                                  | 17%  | 5                                  | 0                  | 0%   | 4                                  | 4                  | 100% | 4                                  | 2                  | 50%  | 8                                  | 5                  | 63%  | 24                                 | 0              |
| 27                                 | 82%  | 70                                 | 52                 | 74%  | 43                                 | 25                 | 58%  | 27                                 | 9                  | 33%  | 4                                  | 4                  | 100% | 2                                  | 0              |
| 73                                 | 51%  | 207                                | 109                | 53%  | 108                                | 46                 | 43%  | 108                                | 39                 | 36%  | 62                                 | 31                 | 50%  | 96                                 | 0              |
| 461                                | 74%  | 606                                | 352                | 58%  | 606                                | 397                | 66%  | 552                                | 354                | 64%  | 413                                | 288                | 70%  | 462                                | 0              |



4.3.

THE “RESPONSIBLE NOMAD” STANDARD  
AND RANGELAND MONITORING

In Mongolia, the “Responsible Nomad” standard for good practices in pastoral livestock production, MNS 6891:2020, has been developed and introduced to support sustainable rangeland management. This standard is based on the principle of using rangelands according to their ecological potential and aims to develop participatory rangeland management grounded in herders’ engagement.

Within the framework of the standard, herders have organized themselves into collective structures, developed and implemented rangeland use plans, and established a system for assessing rangeland condition based on photo monitoring results. Photo monitoring results serve as a key source of information for evaluating the implementation of rangeland use plans, reducing rangeland degradation, and establishing appropriate rangeland use regimes.

To date, a total of 16 cooperatives and primary associations have been included in the certification process under the “Responsible Nomad” standard, and approximately 12,000 herder households belonging to these organizations have been certified. Certified herders are implementing rangeland use plans, assessing rangeland condition based on photo monitoring results, and working collectively to reduce rangeland degradation and maintain rangeland recovery potential<sup>23</sup>.

A sustainable supply chain is also being established for supplying livestock raw materials produced in compliance with the requirements of the “Responsible Nomad” standard to processing factories and purchasing companies. At present, a total of 25 companies purchase raw materials prepared in accordance with the standard and supply them to domestic and international markets. In 2024–2025, certified herder cooperatives and primary associations supplied the following quantities of raw materials to the market.

TABLE 12. Supply of Raw Materials

| Commodity       | 2024                | 2025                |
|-----------------|---------------------|---------------------|
| Yak wool        | 6.23 tons           | 7.65 tons           |
| Goat cashmere   | 22 tons             | 32 tons             |
| Hides and skins | 320 thousand pieces | 335 thousand pieces |
| Meat            | 21 tons             | -                   |

<sup>23</sup> www.greengoldmrrc.com, “Responsible nomads standard,” RN.



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These figures show that the supply of raw materials prepared under the “Responsible Nomad” standard has continued steadily from year to year, with an increasing trend observed for some products<sup>24</sup>.

By linking the rangeland photo monitoring system with implementation of the standard, conditions have been created to regularly monitor rangeland condition, assess the effects of rangeland use, and support responsible production by herders. As a result, the market value of livestock raw materials produced through appropriate rangeland use has the potential to increase by 10–15 per cent, making a tangible contribution to improving herders’ incomes<sup>25</sup>.

Rangeland photo monitoring has become an important tool for the sustainable use of Mongolia’s rangeland resources, the reduction of rangeland degradation, and the sustainable development of the livestock sector. The introduction of this system has made it possible to systematically monitor rangeland condition nationwide, assess the impacts of rangeland use, and support science-based decision-making.

Moreover, implementing rangeland photo monitoring in connection with the “Responsible Nomad” standard is important not only for improving rangeland management, but also for increasing herders’ incomes, enhancing the value of livestock products, and developing a sustainable production system.

Therefore, it will be important to further expand the national rangeland photo monitoring network, improve the database, increase the participation of local institutions and herders, and make broader use of monitoring results in policy decision-making.



*The “Responsible Nomad” standard is established on the premise of rangeland use that respects recovery class and seeks to promote participatory management of rangelands through the active involvement of herders.*

<sup>24</sup> Green Gold - Mongolian Rangeland Research Center, Annual Activity Report, Ulaanbaatar, 2025

<sup>25</sup> S. S. B. B. U. and E. B. D. Densambu, National report on the rangeland health of Mongolia, vol. I. Ulaanbaatar : TEPE LLC, 2018.

## 4.4.

# LOCAL APPLICATION OF PHOTO MONITORING RESULTS: THE CASE OF NOROVLIN SOUM, KHENTII AIMAG

Within the framework of the “Promoting Dryland Sustainable Landscapes and Biodiversity Conservation in the Eastern Steppe of Mongolia” project, rangeland management, protection and restoration measures included in and implemented through the 2022–2025 land management plans of nine target soums in Dornod, Sukhbaatar and Khentii aimags were consolidated and assessed. By comparing project activities with changes observed at photo monitoring points, the assessment demonstrated the potential for using rangeland condition information in local planning and implementation evaluation.

According to the project results report, protection and restoration measures for degraded rangelands were planned for a total of 1,768,520 hectares, equivalent to 26 per cent of the territory of the target soums. This was assessed as providing a basis for improving rangeland governance and reducing land degradation. For example, in Norovlin soum of Khentii aimag, protection and restoration measures were implemented during 2022–2025 across 33,384.4 hectares in 11 locations.

**TABLE 13.** Area of Restoration Measures Implemented under the 2022–2025 Land Management Plans of Norovlin Soum

| Planned measures, hectaress                                | 2022 | 2023          | 2024         | 2025         | Total         |
|------------------------------------------------------------|------|---------------|--------------|--------------|---------------|
| Reforestation, afforestation and tree planting             |      | 1             | 10           | 5            | 16            |
| Forest areas treated for diseases and harmful insects      |      |               | 512          |              | 512           |
| Rangelands rested from use                                 |      | 28,837        |              |              | 28,837        |
| Fencing and protection of water sources and riparian areas |      |               | 2            |              | 2             |
| Rangelands treated for harmful rodents                     |      |               | 2,003        | 2,014        | 4,017         |
| <b>Total</b>                                               |      | <b>28,838</b> | <b>2,527</b> | <b>2,019</b> | <b>33,384</b> |

Across the soum, surveys are conducted at 21 photo monitoring points, representing 507,095.8 hectares of rangelands. According to the 2025 survey results, 33.33 per cent of the monitoring points had not lost their natural reference condition, 33.33 per cent had changed slightly, 19.04 per cent had changed moderately, and 14.28 per cent had changed strongly. No very strongly changed rangelands were recorded.



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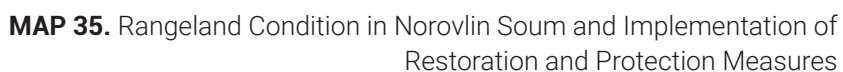
**TABLE 14.** Photo Monitoring Results for Norovlin Soum, 2021–2025

| Recovery class | Notes on recovery class                                                                       | 2021       | 2022       | 2023       | 2024       | 2025       |
|----------------|-----------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|
| I              | Retains its natural reference condition                                                       | 19.04      | 19.04      | 9.52       | 19.04      | 33.33      |
| II             | Slightly changed from its natural reference condition                                         | 42.85      | 28.57      | 9.52       | 38.09      | 33.33      |
| III            | Considerably changed in terms of rangeland vegetation structure, composition and productivity | 9.52       | 14.28      | 57.14      | 23.8       | 19.04      |
| IV             | Strongly degraded, with native plant species lost and increaser species expanded              | 23.8       | 38.09      | 23.8       | 19.04      | 14.28      |
| V              | Very strongly changed rangeland                                                               | 4.76       | 0          | 0          | 0          | 0          |
|                | Not surveyed                                                                                  | 0          | 0          | 0          | 0          | 0          |
| <b>Total</b>   |                                                                                               | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> |

When rangeland changes in Norovlin soum during 2021–2025 are examined, the share of Class I rangelands increased from 19.04 per cent in 2021 to 33.33 per cent in 2025. Class II rangelands accounted for 42.85 per cent in 2021 and 33.33 per cent in 2025. Class III rangelands increased to 57.14 per cent in 2023, but declined to 19.04 per cent in 2025. Class IV rangelands declined from 38.09 per cent in 2022 to 14.28 per cent in 2025. Class V rangelands accounted for 4.76 per cent in 2021, but were not recorded during 2022–2025.



*Through the comparison of outcomes from rangeland management activities with results obtained from photo monitoring, information regarding rangeland conditions is being utilized in local planning and the assessment of implementation effectiveness.*



These results indicate that measures implemented in Norovlin soum, such as resting, protection and harmful rodent control, can have a positive effect on changes in rangeland condition. However, changes at each photo monitoring point depend on many factors, including location, precipitation, grazing pressure, season of use and proximity to water points. Therefore, rather than drawing final conclusions from the results of a single year, assessments should be based on multi-year time-series data.

The Norovlin soum example provides the following lessons.

**FIRST**, when restoration measures are linked with photo monitoring data, the results of implementation can be evaluated more realistically.

**SECOND**, resting rangelands can support vegetation cover and productivity in the short term, but achieving sustainable results requires implementation together with regulation of grazing pressure, seasonal use and water supply.

**THIRD**, for Class IV–V rangelands, it is advisable not only to reduce use pressure, but also to implement protection, restoration and monitoring measures in parallel.



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*Between 2021 and 2025, the proportion of Class I rangelands in Norovlin soum, Khentii aimag, rose from 19.04 percent to 33.33 percent.*