Third Monitoring Report on the National Framework Strategy on Sustainable Development

2017-2018

Drafted by the National Council for Sustainable Development (NFFT) and approved at the NFFT's meeting on December 6 2019

1. Message to the Readers from the members of the National Council for Sustainable Development

In compliance with the decision of the Hungarian Parliament, the NFFT has assessed Hungary's progress every two years since 2015, based on the unique priorities and criteria of sustainable development. The National Framework Strategy on Sustainable Development was adopted by the Parliament in March 2013 with a term ending in 2024, which means that this report assesses the progress made in the achievement of its objectives exactly in the middle of its term. You are now reading the third report (assessing the processes of 2017 and 2018).

For the first time since these reports were first written, two of the 16 key indicators rose above average reflecting a good status even in European comparison. Hungary performs particularly well in the increase of the economic capital and in certain macroeconomic indicators. Hungary shows exemplary fiscal discipline confirmed by the stable decrease of public debt (debt-to-GDP ratio). There have been remarkable improvements in the number and rate of the active population and accordingly, reductions in the unemployment rate as well in the number and rate of materially deprived people. There are a number of long term and efficient programmes designed to strengthen national unity and the connections between Hungarians living within and beyond the borders of Hungary.

Despite these positive results, the state of sustainability in Hungary is, in general, bad, with some of the trends being very unfavourable in European and especially in Central and Eastern European comparison. It is a global phenomenon (that should be addressed by every country) that the development of the human, social and economic aspects of prosperity in a broad sense requires the destruction of a large amount of natural resources. However, developed countries rarely choose to neglect to increase and improve a dominant part of their human and social resources in order to develop their economic capital.

Competitiveness, innovation and social prosperity in a broad sense is impossible without the careful, balanced maintenance and development of our national resources. The NFFT's Action Plan Proposal of May 30 2019 reminds by looking at the state of natural resources in Hungary that the key objectives of the current government cycle will fail without environmental sustainability. This requires a more general description here: if we only focus on the improvement of the macroeconomic conditions of economic activities and the increase of the economic capital while failing to maintain the human, social and natural resources to the required extent, we cannot be sufficiently innovative, competitive and cannot become a European society offering the best quality of life.

All the data confirm this idea. Hungary shows good progress in many economic indicators compared to its own past (public debt is constantly shrinking, the employment rate is the highest ever, the EU criteria for budget deficit are constantly met and the level of material deprivation is the lowest ever) and the quarterly or yearly results of some indicators (GDP growth, investment rate) are outstanding in European comparison. However, Hungary has been failing to steadily reach the EU's average prosperity level for the last one and a half decades with its convergence rate (based on the per capita gross domestic product adjusted for purchasing power) strongly lagging behind within the eleven formerly Socialist EU member states. While we were able to catch up at a rate faster than the EU average between 1999 and 2003, in the last one and a half decades, Hungary overall has been the

second country developing and converging at the slowest rate within the group of countries mentioned above. Looking at a shorter period of time, 2017 and 2018, the years under review in this report, Hungary was able to keep up with the pace of the other countries in Central and Eastern Europe.

For this reason, the NFFT proposes a sustainability shift. The shock of the global economic crisis in 2008 and 2009 was followed by the period of crisis management between 2009 and 2013 and later the economy started growing and continues to grow nowadays leading to an increase in real wages. In recent years, economic activity, including the gross domestic product, has significantly improved, however labour productivity stagnated for a long time and natural resource productivity was steadily deteriorating, reflecting a development pattern which is not sustainable. Hungary is currently in a position when, on the one hand, it has the opportunity to make this sustainability shift and on the other, it is required to do so in order to further consolidate the increase of social prosperity. We may speed up socio-economic development and steadily keep it at a high level if we stop exploiting more and more resources as the basis of such development and focus on boosting and developing knowledge, innovation, efficiency and productivity instead. This is our idea of how we should avoid the middle-income trap along with the trap of development through the destruction of the environment.

Our strong belief is supported by the result of the competitiveness analyses of the Hungarian National Bank. The aspects of competitiveness – which, if looked at closely, reflect the ability of a country's people, the actors of society and the economy to cooperate and the implementation of the values of sustainability – overlap with the aspects determining sustainability to a significant extent. As a result, building development on the foundation of sustainability is not for its own sake; it is the best basis, in harmony with the nourishment of the proper values, knowledge, ability to cooperate, our national natural and cultural heritage, for the long term success of a nation and a happy life for all.

Budapest, 06 December 2019

2. Recommendations to strengthen the sustainability transition

Based on the indicators reviewed in this monitoring report and the quality analyses of the state of the national resources as well as taking into consideration the results of the two previous reports and despite the improvements in certain minor areas, it is predicted that the majority of the objectives of the National Framework Strategy on Sustainable Development will not be achieved by 2024 and Hungary's sustainability transition will progress at a rate slower than required. As a consequence, Hungary may be able to offer a weaker contribution at a national level to the accomplishment of the UN's Sustainable Development Goals (*SDG*s) by 2030 than allowed by its possibilities.

For this reason, the NFFT promotes a sustainability shift, based on the successful crisis management after 2008 and 2009 and the results of the subsequent growth shift.

The two key areas of the proposed sustainability shift is the reduction of the excessive use of the natural resources, the stronger representation of environmental and natural resource restrictions and the increase of our human resources at a larger scale over a longer period of time, the first step of which should be significant changes to be implemented in education.

The objectives and possible means of the environmental sustainability shift are included in detail in the NFFT's Action Plan Proposal of May 30 2019 with the following key components:

- the transformation of land use: preventing the reduction of biologically active areas, switching investments from green-field to brown-field, improving the country's water retention ability by the rehabilitation of aquatic habitats, the development of urban green areas, the increase of ecological services in agriculture;
- circular economy: promotion of the sharing economy, the radical improvement of natural resource productivity, in particular, strong development of the environmental performance of the construction industry, transport and agriculture;
- low-carbon economy: decrease of the emission of greenhouse gases, improvement of energy efficiency, preparation for and adaptation to the effects of climate change, mitigation of our related vulnerability.

The human sustainability shift should basically improve the conditions of the increase of the knowledge capital:

- the income of teachers should in a few years be aligned with the average income of graduate workers and teaching should be made an attractive profession for the most talented young people;
- teaching methodologies should be revised to ensure that students are able to fully demonstrate their creativity, their problem solving skills are significantly boosted and their competence in cooperation based on problem solving is improved,
- the time spent by students in education should be increased by substantially lowering the drop-out rate in secondary education and by raising the rate of people in higher education,
- the role of education supporting social mobility should be considerably improved and the selectivity of the Hungarian school system should be reduced.

The environmental and human sustainability shift can be achieved while maintaining our macroeconomic stability and prudence. The essential means of the environmental sustainability shift are the introduction of stricter rules and restrictive conditions for the use of natural resources, pricing the reduction of natural capital and the use of the environment (introduction of charges, taxes), the removal of environmentally harmful budget expenses, the addition of environmental criteria to specific existing subsidies to prevent the generation of surplus budget expenses by the implementation of the environmental sustainability shift. The human sustainability shift requires a large amount of budget spending, which could be partly financed by the reduction of environmentally harmful subsidies and partly by the reallocation of funds from areas where we reached or outperformed the European average. This means that the need for direct subsidies granted to businesses to create jobs and for a large expansion of the road network is gradually decreasing.

Apart from the two key areas of the sustainability shift, we make the following general proposals to help preserve and improve our national resources and achieve the objectives of the Framework Strategy.

In the field of our human resources, in addition to the shift in education described above, we approve of the government's assiduous and consistent policy actions to stop the population decline and to mitigate social exclusion due to material deprivation and propose to improve the efficiency of the interventions to further approach the European average. In the field of demographics, the compatibility of child-rearing and work (access to day care facilities, opportunities to work flexible hours and part-time) and the recognition of child-rearing as a form of economic value generation should be promoted while emigration of young graduate workers should be reduced. Similarly to education, the health sector should also be fundamentally transformed, including the reform of the institutional and funding system, the increase of public spending relative to GDP, however, the social and professional consensus, one of the pillars of such a comprehensive change, is not yet available, therefore this consensus needs to be reached and the health shift needs to be prepared first.

In order to increase the human capital, the infrastructure of trust should be further reinforced, which means additional efforts are required to reduce corruption and in order to improve trust between the people and towards institutions, transparency should be enhanced, the amount of easily accessible information should be raised and the opportunities of stakeholders to be engaged in decision making should be expanded. Within the Hungarian society, the culture of cooperation and the values promoting sustainability should be reinforced.

The key to maintaining sustained growth in the economy is the improvement of productivity. The current low level of labour productivity could be basically enhanced through the improvement of the education and consequently by increasing our innovation capacity; that is the reason why we proposed a human sustainability shift. Natural resource productivity could be increased through the implementation of the set of our proposals for an environmental sustainability shift described above.

The mitigation of sectoral "tunnel vision", the creation and strengthening of harmony among the dimensions of sustainability as well as the horizontal integration of policies should be top priorities. That is why we propose a parallel, coordinated shift in environmental and human sustainability. The reduction of environmental pollution and healthier lifestyle strategies promote better health, the increase of knowledge improves our innovation capacity, which contributes to the decrease of environmental pollution, and so on, and so forth.

The sustainability shift can be combined with the competitiveness shift proposed by the Hungarian National Bank (MNB) and the actions of the MNB's Competitiveness Programme (2019) can effectively help accelerate the sustainability transition.

Our additional detailed policy proposals defined based on current states and processes described in the monitoring report are included in chapter 3.6.

3. Executive summary

3.1 Purpose of the National Framework Strategy on Sustainable Development

Pursuant to resolution 18/2013. (III.28.) of the Parliament, the Framework Strategy (NSSD) is intended to

- contribute to developing a common agreement on the definition of sustainability;
- promote the determination of the first steps of the transition to sustainability; and
- provide long term strategy for public policy development and decision making.

NSSD is intended to define a system of political and policy goals and means that helps maintain (the quality and quantity of) our national resources on a level

- ensuring Hungary's solid and sustained ability to successfully compete with other nations;
- facilitating the preservation of our natural and cultural heritage for future generations; and
- ensuring appropriate enhancement of resources that may be increased.

The Framework Strategy sets forth responsibilities for the period ending in 2024. NSSD has defined 34 strategic objectives and 77 tasks (instruments) for the four – human, social, natural and economic – resources.

3.2 Purpose of the monitoring report

This biennial regular monitoring report has been designed to

- monitor our national resources through indicators and qualitative analysis;
- review social responses and actions initiated and implemented in the last two years (the Government's complete report on government actions in 2017-2018 to promote the implementation of the Framework Strategy is included in *Annex 1*);
- update the public on the results achieved in sustainability transition, which areas have improved substantially and which areas require more intense efforts.

It is important to stress that the impacts of certain actions for sustainability typically appear with relatively long delays – occasionally after some decades – therefore the tendencies identified in this monitoring report do not always directly allow the fair evaluation of government actions.

This report reviews the period from 1 January 2017 until 31 December 2018.

3.3 Assessment of national resources as reflected by 16 key indicators

The current state of the indicators (their absolute value or value relative to the EU and the V3 average) is evaluated on a scale of five: poor – below average – average – above average – good.

The trends are primarily evaluated in the period under review (2017/2018) and secondly based on the changes since the first year of the Framework Strategy (2012).

Indicator	2012	2013	2014	2015	2016	2017	2018	Current state	Trend	EU average	V3 average
Total fertility rate	1.34	1.34	1.41	1.44	1.49	1.49	1.49	below average	↔	1.59[1]	1.56[1]
Expenditure on education as % of GDP	4.7	4.6	5.1	5.1	4.9	5.1	N/A	average	↗	4.6[2]	4.4[2]
Early school leavers (%)	11.8	11.9	11.4	11.6	12.4	12.5	12.5	poor	↔	10.6	6.5
Healthy life expectancy at birth (years), male/female	59.2/60.5	59.1/60.1	58.9/60.8	58.2/60.1	59.5/60.2	59.6/60.8	N/A	below average	↔	63.5/64	58.9/60.5
Severe material deprivation rate (%)	26.3	27.8	24	19.4	16.2	14.5	10.1	below average	↗	6.6	4.8
Generalised trust scale (ESS, scale of 0 to 10)	4.8	N/A	4.2	N/A	4.5	N/A	N/A	below average	↗	N/A	N/A
Corruption index (Transparency Int., on a scale of 0 to 100)	55	54	54	51	48	45	46	poor	↘	65	56
Number of non-governmental organizations (thousand)	65.3	64.5	63.9	63.9	62.1	61.2	N/A	(declining)	↘	N/R	N/R
Biologically inactive areas (as % of total area)	68	67	67	67	67	67	67.5	poor	↔	N/R	N/R
Natural resource productivity (GDP/DMC, €/kg)	1.14	1.02	0.83	0.87	0.93	0.91	0.81	poor	↘	2.07	0.92
Public exposure to particulate matter pollution [PM(10)] (µg/m3)	28.8	27.3	28.2	26.9	25.3	26.5	N/A	below average	↘	21.6	26.7
Employment rate for population aged 20-64 (%)	61.6	63	66.7	68.9	71.5	73.3	74.4	above average	↗	73.2	69.2
Investments: gross fixed capital formation (GFCF/GDP)	19.3	20.9	22.2	22.5	19.6	22.2	25.5	good	↗	20.5	20.1
R&D spending (as % of GDP)	1.26	1.39	1.35	1.35	1.19	1.33	1.53	below average	↗	1.97	1.25
Public debt (gross) as % of GDP	78.2	76.6	75.7	74.7	74.1	73.4	70.9	average	↗	81.6[1]	49.2[1]
Old age dependency ratio	24.6	25.1	25.8	26.5	27.2	27.9	28.5	average	↘	29.9	23.7

[1] 2017 data
[2] 2015 data

3.4

3.5 Assessment of the current state of the sustainability transition

The changes that took place in the six years since the adoption of the Framework Strategy may already be measured in many instances; the third monitoring report uses the data available to describe the processes based on the criteria of the Framework Strategy.

General observations

- Compared with the previous monitoring report, the key indicators reflect many positive changes. For the first time since these reports were first written, two of the 16 key indicators were evaluated as “above average” or “good”, the two top positions on the scale of five. Nonetheless, the state of sustainability in Hungary, in general, remains unfavourable over time with the majority of the key indicators (14 out of 16) included in the middle or the two bottom categories on the scale of five.
- Within the indicators assessing our national resources, dominantly the indicators associated with the economy improved; this is the only area that performed above the EU average including the employment rate and gross fixed capital formation.
- Despite the improvements that began in the field of human resources, the state of our human resources is concerning, especially the indicators for education and health. The quick improvement of the fertility rate between 2011 and 2016 was replaced by a period of stagnation in 2017 and 2018 as the total fertility rate, despite the growing number of family benefits and grants, remains stuck at 1.49, which is far below the level allowing the reproduction of the population.
- Human and natural resources have shown weak and significant decline respectively in the last two years and ever since the adoption of the National Framework Strategy on Sustainable Development (NFFS).
- While our performance remains below the EU average, the risk of poverty has notably decreased in Hungary since 2013 due to the carefully implemented and long term employment and social policy government actions as well as the increase of the employment rate and real wages. The severe material deprivation rate dropped from 27.8% (2013) to 10.1% within the total population. Income inequality remains below the EU average and the differences in income levels have not risen over the course of our monitoring reports.
- Specific indicators reflect significant improvement in the severe material deprivation rate, the employment rate for the population aged 20-64, the gross fixed capital formation and the (gross) public debt to GDP ratio. However, the following indicators show negative trends: early school leaving rate, corruption index, the number of NGOs, natural resource productivity, exposure to particulate matter pollution and the old age dependency ratio.
- Knowledge is a resource that, if of a high quality, stimulates other resources (healthy lifestyle frequency rises, environmental awareness improves, innovations expands, job supply increases, productivity and social mobility improves etc.). For this reason, it is especially alarming that the ability to apply knowledge acquired in schools in practice is declining and Hungary’s school system is one of the most selective systems among the developed countries retaining social differences at birth to the highest degree. Knowledge capital depends on the time spent in formal education and the quality of education (including primarily the aptitude and excellence of the teachers). It is consequently especially alarming that the time spent in formal education is much shorter than in the Czech Republic or Poland, the drop-out rate is

growing contrary to the EU average tendency, the number of students in higher education is one of the lowest in Europe and the gap between the wages of teachers and the average wages of other graduate workers has not changed since 2010.

- In 2017 and 2018, the period under review (and the trends have remained the same since 2014), all three areas fundamentally affecting the quantity and the quality of the natural capital have experienced steadily negative trends. Hungary is simultaneously challenged by the lowering rate of biologically active areas caused by intensive soil sealing, the decline of natural resource productivity and growing emission of greenhouse gases. This kind of economic growth pursued since 2013 is clearly unsustainable.
- Successful measures appear to be the ones that are supported by strong political and social commitment, implemented by a solid institutional system and are based on purposeful, coordinated, innovative and long term planning and implementation. These measures (such as the reduction of public debt, the increase of employment, the fight against poverty and the attempts to halt the population decline) could offer good examples for the improvement of our national resources in the future.
- The government has demonstrated strong commitment in certain areas specifically relevant for sustainability, such as actions in the field of demographic and macroeconomic policy, however, in the case of other, especially natural and social resources as well as in education and health, interventions are generally selective while coordinated, planned and persistent policy implementation and high level political resoluteness is lacking.
- The institutional system of sustainability remains imbalanced: while many provisions of the Fundamental Law, the advocate of future generations, various advisory bodies (NCSD, the National Council for Environmental Protection, the National Competitiveness Council) and the sustainability directorate of the President's Office collectively establish a uniquely rich institutional system for sustainability in global terms, sustainability continues to be treated, in general and in its horizontal complexity, as a strategic aspect in the executive branch. Effective government coordination is lacking, horizontal integration is weak and the related parliamentary recommendation has only been formally but not efficiently implemented. Laws enacted at times in a speedy manner frequently fail to consider and incorporate the opinions and feedback offered by the above institutions. The government fails to have a structured dialogue with social representatives in order to implement the UN's and national sustainable development goals.
- In the period under review, sustainability, or more precisely, certain aspects of sustainability appeared to become increasingly important for the people and businesses as well. The obvious impacts of the climate change benefited environmental protection and awareness while growing demand for labour and rising wages in the economy put a stronger focus on human factors such as lifelong learning, better work conditions and health consciousness.

Not unlike at the time of the preparation of the previous monitoring report, the trends in Hungary's demographic processes in the field of human resources remain one of the most urgent sustainability issues. Despite the multiple government measures supporting families, introduced after the previous monitoring report, the number of marriages and childbirths is stagnating. The increase of the capacity of day care facilities and the employment of parents with young children in flexible or part-time schemes remains a pressing issue. In the meantime, as the ageing of the population continues, issues regarding the sustainability of pension system become more urgent although the pension system will

remain economically stable until 2030. Emigration continues to be a problem for Hungary: while the number of people returning to Hungary has been clearly growing in recent years and the pace of emigration is now lower, the migration balance between people leaving and returning to Hungary remains negative. Additionally, unlike other immigration patterns in Central and Eastern Europe, the rate of Hungarian graduate workers leaving their home country is much higher.

In the field of health, life expectancy at birth failed to effectively rise in 2017 and 2018 but the self-perceived health of the Hungarian people improved and healthy life expectancy at birth slightly rose for women. However, various behaviours adversely affecting health, in particular physical inactivity, smoking and unhealthy diets, remain a severe health risk; among the diseases, high blood pressure is extremely prevalent, affecting almost the entire population aged 75 and older. The prevention and monitoring of the health issues associated with environmental conditions continues to lack the required focus. While there have been some positive changes to make the health sector more sustainable, including making the wages of health care workers more competitive, further action is needed. In Hungary, the rate of public funds spent on financing the health sector, relative to GDP, is gradually lowering. In 2017, public spending on health was 4.8%, not even reaching 70% of the EU average and notably lagging behind the average of the Visegrad countries, which is likely to be associated with the problems of the population's health status, especially the quality of the services of the health care system. This means that public spending on health relative to GDP needs to be increased.

Hungary's education system continued to decline after the previous monitoring report, the gap between our quantitative and qualitative indicators and the European average or the average of the Visegrad countries, our direct competitors (especially the Czech Republic and Poland) keeps growing. The selectivity of the education system further increased, which means that schools are unable to reduce the socio-economic differences between students. While the number of early school leavers continued to rise compared with the previous report, the participation of low skilled workers in lifelong learning and further training remains poor. The problem solving skills, especially the collaborative problem solving skills of students are the poorest among the developed countries.

It is important to highlight in the field of social capital that the improvements started in social inequalities and poverty continued: In Hungary, the risk of social exclusion went down from 26.3% in 2016 to 19.6% in 2018, which means that Hungary has reached the EU2020 target. The rate of people living in low work intensity households fell by fifty per cent (4.1%) while the number of people living in severe material deprivation lowered by 40% in the same period although their rate remains high in European comparison (10.1%). Meanwhile, the rate of children at risk of poverty dropped significantly, due primarily to the availability of free food in preschools (kindergartens) and schools. The income inequality in Hungary is lower than the EU average (we are on the same level as Sweden and Austria), the differences in income levels have remained stable since 2014; income polarisation is not growing.

Hungary's corruption index has further declined since the previous monitoring report remaining one of the worst rates throughout the EU. While the non-governmental sector has also continued to shrink, the revenues of these organisations (not equally based on their types) rose.

The government has made robust efforts in the recent period to nourish the heritage of the past and reinforce national unity leading to a significant increase in financial and cultural support provided to the diaspora.

On the positive side, the state and sustainability of the natural resources has become a topic of public discussion in the last two years with the environmental movements and initiatives reaching more and more people. Nonetheless, our natural resources have failed to improve in the last two years or the last ten years. While article P) of the Fundamental Law stated that natural resources form the common heritage of the nation and must be protected, maintained and preserved for future generations, their documentation is insufficient and the changes are still not reported yearly.

In Hungary, the disappearance of habitats, the decline in the state of the remaining habitats and land degradation appear to be a sustained and severe trend. Species become threatened while the number of other species falls. The disappearance and steady degradation of natural habitats, i.e. the loss of biodiversity leads to a reduction in ecosystem services. For example, the decrease in the number of pollinating insects threatens pollination as an ecosystem service.

The rate of biologically inactive areas has been stagnating at a high level for a relatively long time. The challenges here include the rise of fertiliser use, the prevailing high rate of intensive agricultural production, the associated growing soil degradation together with the insufficient ecological and chemical condition of the surface and underground water reserves.

Resource productivity shows a negative trend: Hungary needs to use more natural resources than the EU average to obtain the same economic result. This is partly explained by the boom in the extremely material-intensive construction industry. An improvement in waste management is the growing rate of selectively collected waste and the simultaneous rise in the quantity of recovered waste although we are nowhere near to complying with the EU requirements for reuse and recycling rates.

In the area of air quality, the pollution by particulate matter in ambient air (PM_{10} and $PM_{2,5}$) is the biggest problem in Hungary, which mostly comes from residential heating using solid fuels and transport. While this area shows a positive trend over time, certain monitoring stations regularly and in growing numbers report concentration levels of PM_{10} exceeding the daily limit. High concentration of PM_{10} is a top cause of death. Noise pollution adversely affecting health remains an issue to be addressed.

As an impact of the climate change, extreme weather events are becoming more frequent in Hungary. Critical issues here include the number of days with extremely hot weather, droughts and adaptation to torrents. As a positive action in the area of water management, objectives to retain water and to create farms with water saving irrigation systems have been defined.

Since the previous monitoring report, the former positive trend in energy intensity turned into stagnation. The year-on-year growth in primary energy demand was 4.2% in 2017 exceeding the rate of GDP growth. The rate of renewable energy use in Hungary is declining, totalling less than 13.5% of final energy consumption in 2017. Furthermore, the sources of renewable energy are imbalanced: four-fifth is produced by the agriculture and over two-third is associated with use in power plants and as firewood in households while the use of biomass defined as a conditionally renewable energy source is also increasing. An improvement, however, is the dynamic growth of PV generation (solar power) identified as a fully renewable source of energy but its share is still very low totalling only 0.2% of the total energy consumption.

It is to be highlighted that Hungary is still among the best in the EU in terms of maintaining a low level of greenhouse gas emissions. However, the growth of greenhouse gas emissions equalling or exceeding the gross domestic product between 2014 and 2017 should be treated as a risk factor.

The adoption of a number of strategic documents and programmes in 2017 and 2018 designed to protect and preserve our natural heritage as well as to improve our adaptability could pave the way for a positive turn. However, the conditions to implements these strategies are often absent as transformations in the institutional system and changes in procedures have a counterproductive effect.

Since the previous report, the Hungarian economy grew even stronger reflected primarily by GDP growth, higher employment, the rise of corporate borrowing, the increase of the net financial wealth of households and the decrease of public debt relative to GDP.

While economic growth stimulated a dynamic increase in consumption and investments, this did not trigger any tendencies threatening macro prudence on the consumption side of the gross domestic product. After a period of stagnation, the net financial wealth of households has massively grown in the last ten years while foreign direct investment is also rising (after a temporary decline) in Hungary. The financing options of investments into human and physical capital in general improved.

While the trade surplus has been steadily decreasing since 2017, its amount remains and is predicted to remain high in the near future. Partly this surplus and the robust growth of GDP will likely eliminate Hungary's foreign debt by 2020 and the country may again become a net foreign creditor after 50 years. Since the previous monitoring report, export growth has continued at a slower rate.

The conditions of borrowing have improved for small and medium sized enterprises; while corporate borrowing is dynamically growing, it is still not sufficient for the required supply of capital. There has not been any effective improvement in administrative burdens for SMEs, which remain extremely overwhelming despite the government's tax reduction, of the highest rate in the EU, which started in 2017 and continued in 2018.

There has been dynamic growth in the area of employment: the employment rate is over the EU average and is steadily approaching the EU2020 target. Meanwhile, labour productivity stagnated for a long time, reaching the level of 2010 in 2017 only and further improving in 2018. It is a positive development that the increase in the number of employed people exclusively took place in Hungary's primary labour market from 2017. The employment of first-time employees is especially important for sustainability: it shows a positive trend while their unemployment remains a significant issue.

While research and development continues to lack the required funds and human resources, there was a slight increase in research and development (R&D) spending as a percentage of GDP after the previous monitoring report, dominantly due to the accelerated pre-financing of EU funds. While financing issues may be tackled through appropriate government measures, the required human resources may only be provided by first delivering a massive improvement in the efficiency of the education system.

3.6 Policy recommendations:

In order to promote the transition towards sustainability – and to support the achievement of NFFS's objectives – the present monitoring report makes the following policy and horizontal recommendations in addition to the general recommendations included in chapter 2:

A) Improvement of high level political commitment towards sustainability

- Sustainability as a value has become part of the public discussion, which is an extremely positive development. However, further enhancement of the communication linked to sustainability should consider that, on the one hand, the meaning of expressions previously used in the area of environmental protection has significantly changed through the public discussion, in some cases, becoming independent from or even reverse to the original meaning causing a lack of terms that communicate the same message for all the people. On the other hand, sustainability continues to primarily exist in its environmental/natural dimension remaining absent in relation to human, social and economic capital, despite the fact that sustainability requires a complex approach and interpretation.
- In general, awareness about the definition of sustainability agreed to in the Framework Strategy needs to be further raised and the application of this definition in public administration should be improved. As objectives of the Framework Strategy have only selectively, inhomogeneously guided certain policy decisions, the commitment of high level political leaders toward the promotion of sustainability should be strengthened and the coordination of policies on ministerial level should assume a real, functional role in the implementation of NFFS. Sectoral policies should be constantly revised in order to promote the objectives and the philosophy of the Framework Strategy.
- In order to improve the long term impacts of public policy decisions, the institution of preliminary sustainability studies should be introduced for which a professional approach has been elaborated by NFFT.

B) Conscious and stimulating population policy

- To improve demographic trends, measures to encourage higher birth rates should be maintained and expanded, including in particular, further increasing the capacity of day care facilities and supporting the employment of workers with young children (part-time jobs and working from home). Fertility indicators show that most parents choose not to have a second child, either due to the late arrival of the first child or individual decisions made after the birth of the first child. However, as government measures seem to have been successful in encouraging parents to have a third child after the first two, the further expansion of actions designed to improve birth rates is strongly recommended for second children. Moreover, in order to manage the health aspects of reproduction, access to fertility treatment, various screening and test programmes for couples planning families such as the launch and promotion of related programmes such as family planning guidance may be considered.
- Other solutions to disrupt the population decline such as the increase in healthy life expectancy and the reduction of emigration (in particular among generations of reproductive age) should also be enhanced. Furthermore, the recognition of child-rearing as a form of economic value generation and parental security should also be improved. Stronger focus should be placed on the deeper understanding of demographic processes and behaviours of Hungarian communities living within and beyond the borders of Hungary.
- There has been a great amount of progress achieved in the field of national policy since the previous monitoring report; it is important to ensure that existing programmes and forms of support remain accessible for the Hungarian community and its organisations living beyond the borders of Hungary in the long term; this will create and consolidate a trustful bond that will massively contribute to the nourishment of the Hungarian cultural treasures and heritage and to the reinforcement of connections between Hungarians living within and beyond the borders of Hungary.

C) Promotion and dissemination of health conscious behaviours

- In health care, the continued support and promotion of screening programmes remains a top priority, which help improve the early diagnosis of health conditions.
- It is highly recommended that programmes designed to help develop love for sports and learn the pleasures of exercise be introduced and promoted as physical inactivity is a severe health risk. Supporting the operation of amateur sports clubs would be especially important as opportunities to choose from a wide range of sports and exercise activities, which could fill the gap between physical education at school and competitive sports, are missing.
- Stress at work is not an individual but a collective problem, which causes quantifiable losses in the economy. To address that problem, we recommend that a comprehensive plan to treat and reduce stress at work be developed and awareness raising and educational programmes be launched and promoted.

D) Improvement of quality and efficiency in education

- The current funding system of public education strongly contributes to the selectivity of schools. Religious and minority schools are increasingly popular; they receive higher normative funding, have more elbowroom and their own admission systems, which further consolidates the selectivity of the education system and supports the establishment of elite schools. We recommend that the above aspect be considered in planning future changes in the public education system.
- Engaging not only students but also parents in career guidance programmes may help all students choose the type of school in secondary and higher education best suiting their abilities and interests. This could help resolve the dilemma of how to increase the reputation of vocational training while also stimulating the growth of the number of university graduates as Hungary needs a higher rate of people with higher education degrees to support its current development and future sustainable development.
- It would be crucial to strengthen financial education and teach it in schools. While the country's dynamic economic growth does not yet go hand in hand with the growth of financial awareness, it is an improvement that the dissemination of financial and entrepreneurial competences and skills is now a top priority for the government.
- R&D spending should be raised, the quality of state-financed science should be improved and research careers should be made more attractive including in particular by offering fair and competitive wages to the academic and research staff. It is a step forward that research centres have been set up with government funding, however their sustained survival should also be ensured partly in order to strengthen Hungary's role on the international scientific scene.

E) Increasing the competitiveness of wages and reducing regional differences

- Wages are importantly required to be made more competitive, in particular in professions experiencing a high rate of shortages due to the lack of qualified workers or the departure of qualified workers from Hungary. We see a positive trend among medical doctors due to the introduction of the Resident Programme and other grant/scholarship programmes, which should be maintained and strengthened in the future and may also be used as an example in other understaffed professions.

F) Long term economic stability

- As a consequence of low productivity, the rate of potential growth determining the long term growth opportunities of Hungary's economy is low; it is a question whether the current high

rate of economic growth can be maintained in the long term. That is the reason why labour and natural resource productivity must be improved to a significant degree and in a sustained manner.

- The pension system will remain sustainable in the years to come, the pension system deficit is predicted to start rising after 2030. In the long term, this problem may be tackled by maintaining or further increasing the high rate of employment, however this requires the improvement of the performance of as well as the substantial reduction of the inequalities of the education and the health care systems.

G) Improvement of natural resource productivity and development of the circular economy

- Compared with the previous monitoring report, resource productivity has been declining. The available data show that economic growth triggers the increase of material use, which can cause not only economic (productivity) but environmental sustainability problems as well. The improvement of resource productivity could gain a new momentum by the widespread adoption of the circular and sharing economy and by a boost in the service and the R&D&I sectors. The widespread adoption of the circular economy could enable production and export to grow while causing less environmental damage.
- The increased use of renewable energy sources is a positive process, however the sources of renewable energy are imbalanced in Hungary: four-fifth is produced by the agriculture and over two-third is associated with use in power plants and as firewood in households. These together with the large amounts of conditionally renewable biomass used may be challenges for sustainability. In the field of the use of renewable energy sources, we recommend that the mix of energy sources be adjusted in order to ensure the dominance of fully renewable energy sources, for example, the dynamically growing use of solar power (PV generation) should be promoted. Furthermore, informative, educational, awareness raising campaigns should be organised on the importance of the use of renewable energy sources and the Energy and Climate Awareness Raising Action Plan should be completed by sharing information and best practices on energy poverty, the management of the use of illegal heating materials and the environmental impacts of the use of biomass and lignite in households.
- The government should offer benefits (for example by reducing taxes and employment contributions or paying the costs of utilities) to promote the setup and operation of package free shops.
- The policies on taxes and subsidies should be reviewed and revised in order to limit the excessive use of natural resources.

H) Improvement of climate change vulnerability

- Compared to other EU countries, Hungary is extremely vulnerable to climate change. One-fourth of the population live in areas affected by very high or high risk of heat waves; vulnerability significantly varies from region to region and affects Hungary's disadvantaged areas to a larger extent. Climate change is predicted to increase the frequency of torrents, thunderstorms, hailstorms and droughts. The growing risks caused by the climate change require a complex approach and management as well as the urgent implementation of the National Climate Change Strategy. In cities, it is a pressing and unavoidable task to maintain and expand green areas including, in particular, by planting trees to provide shade from the sun as a solution helping the adaptation to climate change.

I) Improvement of the protection of biodiversity and natural habitats

- In order to reduce the decline in biodiversity, the protection of natural habitats must be urgently addressed as the most frequent cause of the decrease of the natural capital is the destruction of natural habitats. This should be a priority at the selection of investment sites by limiting green-field investments and diverting needs towards brown-field areas.
- While Hungary has one of the highest per-capita freshwater resources in Europe, their source is primarily the large rivers flowing through the country. The ecological and chemical condition of surface and underground water is declining. We recommend that stronger focus be put on the protection of Hungary's freshwater resources and the storage of water collected when it is available in large quantities, for future use (such as irrigation).
- In order to promote the knowledge-based society and the idea of sustainable development, the general public (businesses, local government decision makers, people) should be educated about the trends reflecting the biodiversity of natural and agricultural habitats as well as the state of the natural resources, also involving the printed and electronic press and social media.

J) Management of the sustainability challenges of public utilities

- The issues with public water supply entities and the infrastructure managed by these providers still need to be addressed as they have not been resolved since the previous monitoring report. Changing residential consumption patterns, the economic impacts of the utility cost reduction action by the government and the modernisation requirements of the out-of-date infrastructure present real sustainability challenges while the financial and technical unsustainability of the system cause severe environmental sustainability issues.
- The operating problems of the waste management public service also need to be urgently addressed. The significant and constant transformations in this sector, residential habits and the economic impacts caused by service charges and the utility cost reduction action of the government present real sustainability challenges; a further decline in the waste management public service will lead to severe environmental sustainability issues.

K) Improvement of the quality and quantity of data

- Data related to natural resources should be presented in a more detailed (e.g. sector-time series) and precise manner, as follows:
    - relating to particulate matter in ambient air (in particular, indicators on health conditions caused by particulate matter);
    - statistics relating to climate change (survey method for climate change vulnerability should be introduced);
    - a renewable energy potential estimate should be developed for Hungary by region to enable the precise determination and regional division of the targets for each energy type within the national targets;
    - data relating to the condition of Hungary's freshwater resources are out-of-date, need to be updated and extended;
    - surveys and databases relating to invasive species in Hungary are incomplete; as the spread of non-native species is one of the most severe risks for nature, surveys should be more precise, organised in databases and distributed;
    - climate change and the associated frequency of droughts will likely lead to enormous damage caused by insects; to protect oak and beech forests, the monitoring of defoliation should be extended.