

# From Beyond GDP to Life-Coherent Progress

Re-Grounding Progress, Wealth, Peace,  
Efficiency, and Governance in Life



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## Table of Contents

<b>Abstract</b> .....	<b>4</b>
<b>Keywords</b> .....	<b>5</b>
<b>Executive Summary</b> .....	<b>5</b>
<b>Part I — The Historical Opening: Why GDP Is No Longer Enough</b> .....	<b>8</b>
<b>Part II — The UN Beyond GDP Framework: A Necessary but Incomplete Advance</b> .....	<b>13</b>
<b>Part III — The Missing Depth: From Measurement to Life-Value</b> .....	<b>19</b>
<b>Part IV — Life Capital: Deepening the Five-Capitals Framework</b> .....	<b>24</b>
<b>Part V — Life-Coherent Efficiency: From Output Productivity to Life-Good Provisioning</b> .....	<b>33</b>
<b>Part VI — Positive Peace and Life-Capacity: From Conflict Absence to the Reduction of Avoidable Life-Harm</b> .....	<b>42</b>
<b>Part VII — Relational Biology and the Worlds Measurement Brings Forth</b> .....	<b>48</b>
<b>Part VIII — The Life-Coherent Framework for Progress</b> .....	<b>55</b>
<b>Part IX — From Dashboard to Life-System Diagnostic</b> .....	<b>63</b>
<b>Part X — The Life-Coherent Action Method: From Measurement to Transformation</b> ....	<b>70</b>
<b>Part XI — The Life-Coherent Conversation: Coordinating Action through Legitimate Coexistence</b> .....	<b>78</b>
<b>Part XII — Applications: Applying Life-Coherent Progress Across Policy Domains</b> .....	<b>84</b>
<b>Part XIII — Research and Measurement Agenda: Building a Life-Coherent Evidence Base</b> .....	<b>91</b>
<b>Part XIV — Discussion: The Promise and Risk of the Beyond GDP Agenda</b> .....	<b>99</b>

**Part XV — Conclusion: Re-Grounding Progress, Wealth, Peace, Efficiency, and Governance in Life ..... 104**

**Back Matter ..... 109**

**References and Further Reading ..... 166**

**Author Bio..... 169**

**Analytical and Editorial Support..... 169**

**Back Cover Synopsis ..... 170**

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## Abstract

Gross domestic product has long functioned as the dominant shorthand for national progress, yet it was designed to measure economic activity, not the full conditions of human and planetary flourishing. Economic growth can coexist with inequality, ecological degradation, declining trust, poor health, social fragmentation, and the erosion of future viability. The United Nations High-Level Expert Group on Beyond GDP has therefore made an important contribution by proposing that progress be measured as **equitable, inclusive, and sustainable well-being**, supported by a dashboard of indicators covering foundational principles, current well-being, equity and inclusion, and sustainability and resilience (High-Level Expert Group on Beyond GDP, 2026).

This white paper argues that the Beyond GDP agenda is necessary but incomplete if it remains primarily a measurement framework. A wider dashboard can make visible many harms that GDP conceals, but it cannot by itself transform the social, economic, ecological, technological, and institutional relations that generate those harms. The next step is a life-coherent framework for progress: one that asks whether the dominant arrangements of society enable or disable the life-capacities required for persons, communities, ecosystems, and future generations to live, heal, participate, repair, and flourish.

The paper integrates four complementary streams of thought. The UN Beyond GDP agenda provides the institutional opening. John McMurtry's life-value onto-axiology provides the normative criterion: value consists in what enables more coherently inclusive ranges of thought, feeling, and action, while disvalue consists in what reduces, disables, or destroys such ranges (McMurtry, 2011a, 2011b, 2018). Johan Galtung's peace theory deepens peace beyond the absence of direct violence toward the reduction of structural and cultural conditions that constrain life. Humberto Maturana's relational biology reminds us that worlds are brought forth through distinctions, language, emotion, and recurrent relations of coexistence.

Building on these foundations, this white paper proposes a life-coherent deepening of Beyond GDP. It reframes progress as the expansion of life-capacity; wealth as life capital; peace as the reduction of avoidable life-harm; efficiency as the increasing provision of life goods with diminishing life-loss; and governance as the coordination of life-enabling conditions through the legitimate coexistence of all those affected, including those unable to speak for themselves. The aim is to move from measuring economic output, to measuring multidimensional well-being, to transforming the conditions through which life is enabled or disabled.

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## Keywords

Beyond GDP, life-coherent progress, life-value onto-axiology, life capital, civil commons, positive peace, structural violence, Maturana, McMurtry, Galtung, well-being, sustainability, planetary flourishing, life-capacity, organism–niche relation, legitimate coexistence, ecological efficiency, human development efficiency, civilizational measurement, regenerative governance.

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## Executive Summary

Gross domestic product was designed to measure the scale of economic activity. It was not designed to measure whether people are healthy, whether communities are cohesive, whether institutions deserve trust, whether ecosystems are regenerating, whether care is supported, whether work is dignified, or whether future generations inherit viable conditions of life. Yet GDP and its growth have become the dominant public shorthand for progress. This has generated a deep measurement distortion: monetized activity appears as development, while many forms of life-support, harm, depletion, and repair remain secondary or invisible.

The United Nations High-Level Expert Group on Beyond GDP has made an important intervention into this historical problem. Its report, *Counting What Counts: A Compass of Progress for People and Planet*, proposes that progress be understood as equitable, inclusive, and sustainable well-being. It organizes a dashboard of thirty-one indicators around four components: foundational principles; current well-being; equity and inclusion; and sustainability and resilience. The report further links future well-being to produced, human, social, institutional, and natural capital (High-Level Expert Group on Beyond GDP, 2026).

This is a necessary advance. It widens the field of visibility beyond economic throughput and creates an institutional opening for governments, statistical systems, civil society, researchers, and international organizations to ask richer questions about progress. It also recognizes that GDP growth has coexisted with inequality, environmental degradation, and declining trust in public institutions, and that GDP cannot capture the full range of outcomes that shape people's lives (High-Level Expert Group on Beyond GDP, 2026).

However, the framework remains incomplete if it stops at broader measurement. A dashboard can reveal that inequality is rising, that loneliness is worsening, that ecosystems are degrading, that institutions are mistrusted, or that well-being is unevenly distributed. But a dashboard does not by itself determine what is ultimately valuable, what forms of capital are true or false, what kinds of harm are normalized, what policies must be de-implemented, or what relations must be repaired.

This white paper therefore proposes a life-coherent deepening of the Beyond GDP agenda. It does not reject the UN framework. Rather, it asks what deeper architecture is needed so that the framework becomes transformative rather than merely descriptive. The central claim is that

progress should be evaluated by whether social, ecological, economic, technological, and institutional arrangements expand or reduce life-capacity: the real capacities of persons, communities, ecosystems, and future generations to live, heal, develop, relate, participate, repair, create, and flourish within the web of life.

The paper draws on four foundations. First, the UN Beyond GDP agenda provides the global measurement opening. Second, McMurtry's life-value onto-axiology supplies a criterion of value: what expands life-capacity is value; what disables it is disvalue. Third, Galtung's peace theory shows that peace cannot be reduced to the absence of war or conflict deaths; it must include the reduction of direct, structural, cultural, ecological, institutional, commercial, and digitally mediated forms of avoidable harm. Fourth, Maturana's relational biology reminds us that indicators are not neutral mirrors of reality. They are distinctions made by observers within histories of language, emotion, power, and relation.

The paper develops the concept of **life capital** as a deeper criterion for evaluating the UN's five capital distinctions. Produced, human, social, institutional, and natural capital are useful categories, but they are not automatically life-enabling. Produced capital may destroy ecosystems. Human capital may be reduced to labor productivity. Social capital may protect exclusionary networks. Institutional capital may preserve power rather than justice. Natural capital may be treated as a substitutable asset rather than as the life-ground of all value. A capital stock becomes life capital only when it secures life goods, expands life-capacity, strengthens civil commons, regenerates through time, respects ecological thresholds, and avoids burden displacement.

The paper also reclaims efficiency. McMurtry's principles of life-coherent provisioning culminate in a redefinition of efficiency: efficiency increases only when life goods are provided with diminishing ecological waste, reduced material and energy burden, less mandatory life-time loss, and expanded human development (McMurtry, 2018). This reframes efficiency away from cost reduction, profit margins, or output productivity alone, and toward life-good provisioning with less life-loss.

The paper then extends Galtung's concept of positive peace. The UN Beyond GDP framework includes peace as a foundational principle, but its operationalization risks remaining too narrow if peace is measured primarily through conflict-related deaths. A life-coherent peace framework asks whether avoidable life-harm is being reduced across the full field of social and ecological life: food, water, housing, care, safety, dignity, institutional access, ecological security, public trust, and repair.

Maturana's contribution deepens the argument further. If societies coordinate ways of living through recurring patterns of speech, feeling, attention, and relation, then the question is not only what indicators measure, but what world their use helps conserve. A GDP world brings forth producers, consumers, prices, outputs, and growth. A Beyond GDP world brings forth dashboards, well-being domains, and sustainability indicators. A life-coherent world must bring forth living beings in relation: persons, communities, ecosystems, care, repair, dignity, trust, participation, and future generations.

The resulting framework is organized around a generative logic: **exposure, repair, margins, life-capacity, and flourishing**. Life is enabled when harmful exposures are reduced, repair pathways are accessible, restorative margins are protected, civil commons are strengthened, and life-capacities expand. Life is disabled when cumulative exposures exceed repair capacity, when margins are depleted, when commons are enclosed, and when societies normalize adaptation to preventable harm.

The paper concludes by proposing a life-coherent action cycle: recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, and learn. This cycle moves measurement from description to transformation. The goal is not merely to count what GDP misses, but to help societies care for, protect, and regenerate the conditions through which life becomes possible.

The central question is simple:

**Does this way of living enable life to live?**

Put more formally: do the dominant social, economic, technological, institutional, and ecological arrangements expand or reduce the life-capacities required for human and planetary flourishing?

# Part I — The Historical Opening: Why GDP Is No Longer Enough

## 1. Introduction: The End of GDP as Civilizational Compass

For much of the modern era, economic growth has served as the dominant public language of progress. Nations have been judged by the expansion of their economies; governments have been rewarded or punished by growth rates; international institutions have compared development through national income; financial markets have interpreted economic output as a sign of strength; and public debate has often treated gross domestic product as if it were the closest available measure of collective success. GDP became, in effect, the numerical emblem of modern development.

This dominance was not accidental. GDP is useful. It measures economic activity in ways that can inform fiscal policy, monetary policy, planning, investment, and international comparison. It can help identify recessions and expansions, estimate the scale of market production, and track changes in economic output. A serious critique of GDP need not deny these uses. The problem is not that GDP measures nothing. The problem is that it measures something narrow and has been made to stand for something vast.

GDP measures monetized economic activity. It does not tell us whether people are healthy, whether work is dignified, whether children are safe, whether communities trust one another, whether institutions are fair, whether ecosystems are intact, whether care is supported, whether knowledge is shared, whether the vulnerable are protected, whether future generations inherit a livable world, or whether life-capacity is expanding or contracting. Yet by becoming the dominant shorthand for progress, GDP has allowed a society's monetized throughput to be confused with its real development.

The consequences of this confusion are now visible everywhere. Economic growth can coexist with widening inequality, preventable disease, burnout, loneliness, ecological degradation, distrust, and despair. It can coexist with rising consumption and declining social cohesion. It can coexist with overburdened caregivers, insecure workers, displaced communities, degraded public services, polluted waters, collapsing biodiversity, and young people who no longer believe the future is open to them. It can even coexist with the destruction of the very life-support systems on which all economic activity depends.

This is the paradox the Beyond GDP movement has brought to the surface. A society may grow and yet become less livable. It may produce more and yet heal less. It may accumulate assets and yet deplete the conditions of life. It may expand markets while narrowing the real capacities of persons and communities to live with dignity, agency, belonging, meaning, and ecological security. Growth may correspond to progress, but only where it expands life-enabling conditions. Without that correspondence, growth remains ambiguous and may become destructive.

The UN High-Level Expert Group on Beyond GDP has given institutional expression to this recognition. Its report argues that GDP remains an indispensable measure of economic activity, but that it was never designed to capture the full range of outcomes that shape people's lives. It proposes a new compass of progress oriented toward equitable, inclusive, and sustainable well-being, measured through a dashboard of indicators that includes foundational principles, current well-being, equity and inclusion, and sustainability and resilience (High-Level Expert Group on Beyond GDP, 2026).

This is a major step. It acknowledges that societies have been asking GDP to answer questions it was never designed to answer. It affirms that progress is multidimensional, relational, intergenerational, and ecological. It creates space for a richer public conversation about what governments should measure and what policy should serve.

Yet the historical moment requires another step. The movement beyond GDP must not become merely a movement toward more indicators. A wider dashboard can make hidden harms visible, but visibility is not the same as transformation. A society can measure inequality and still reproduce it. It can measure environmental degradation and still authorize it. It can measure loneliness and still design isolating cities, workplaces, and digital systems. It can measure institutional trust and still maintain institutions that burden or exclude the people they claim to serve. It can measure sustainability while continuing to treat the living Earth as an accounting category.

The deeper question, therefore, is not only whether GDP is too narrow. It is whether the whole architecture of progress remains answerable to life. What does a society ultimately serve? What does it protect? What does it make easier? What does it sacrifice? What does it normalize? What does it call efficient? What does it call capital? What does it call peace? What does it call development? What patterns of life do its measurements help conserve and reproduce?

A life-coherent framework begins here. It accepts the necessity of going beyond GDP, but it does not stop at multidimensional measurement. It asks whether the measured order enables life to live, heal, participate, repair, and flourish. It evaluates economies, institutions, technologies, policies, and cultures by their effects on life-capacity. It treats persons not as isolated units, but as living beings in recurrent relation with air, water, food, shelter, care, work, language, culture, law, technology, ecosystems, and future generations. This builds directly on the life-coherent health framework, which defines health as life-capacity enabled, healing as life-capacity restored, and flourishing as life-capacity expressed in dignity, relation, meaning, participation, and ecological belonging (Sahely, 2026).

The movement required is therefore not simply from GDP to a broader dashboard. It is from output measurement to life-coherent progress.

GDP measures economic activity.

Beyond GDP measures multidimensional well-being.

Life-coherent progress asks whether the whole pattern of living enables life-capacity within the web of life.

That third movement is the task of this white paper.

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## 1.1 The contribution of this paper

This paper makes five contributions.

First, it reframes the Beyond GDP agenda through the concept of **life-capacity**. Progress is not only multidimensional well-being; it is the expansion of the real capacities required for persons, communities, ecosystems, and future generations to live, heal, participate, repair, and flourish.

Second, it introduces **life capital** as the evaluative criterion for judging the UN's five forms of capital. Produced, human, social, institutional, and natural capital are necessary categories, but they become true capital only when they secure life goods and regenerate life-capacity through time.

Third, it extends peace measurement through Galtung's distinction between negative and positive peace. Peace is not reducible to the absence of armed conflict or conflict-related deaths. It includes the reduction of avoidable life-harm embedded in social, cultural, ecological, institutional, commercial, and digitally mediated systems.

Fourth, it uses Maturana's relational biology to show that indicators help bring forth worlds. Measurement is not only representation. It participates in shaping what societies see, value, fund, govern, repair, and ignore.

Fifth, it proposes a practical life-coherent action cycle for moving from measurement to transformation: recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, and learn. This cycle is adapted from the life-coherent health framework, where it is used to move from root causes to life-enabling action (Sahely, 2026).

The paper's aim is constructive. It does not reject the UN Beyond GDP framework. It seeks to deepen it. The UN report widens the compass of progress. A life-coherent framework asks what that compass must ultimately serve.

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## 1.2 The guiding question

The paper is organized around one simple question:

**Does this way of living enable life to live?**

This question is intentionally plain. Its purpose is to return progress to the ground from which all measures arise. Put more formally, the question asks whether the dominant social, economic,

technological, institutional, and ecological arrangements expand or reduce the life-capacities required for human and planetary flourishing.

This question does not imply a world without suffering, illness, conflict, uncertainty, or death. Life-coherence is not perfection. It does not mean eliminating all vulnerability or difficulty. It means that avoidable harm is not normalized, repair is not blocked, commons are not enclosed, and the conditions for dignified coexistence are actively protected.

In this sense, the question is not utopian in a naïve way. It is practical. Every policy already affects life-capacity. Every budget already distributes exposure, repair, and margins. Every institution already enables or disables access to life goods. Every technology already shapes attention, agency, and relation. Every economic system already provisions some things and neglects others. A life-coherent framework makes these consequences explicit and accountable.

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### 1.3 The structure of the argument

The paper unfolds in a sequence.

Part II examines the UN Beyond GDP framework as a necessary but incomplete advance. It identifies the strengths of its dashboard and the limitations of dashboard thinking when not grounded in a deeper theory of value, power, repair, and transformation.

Part III introduces life-value as the missing depth. Drawing on McMurtry's life-value ontology, it argues that progress must be judged by whether it expands or reduces life-capacity.

Part IV develops life capital as the life-value upgrade of the UN five-capitals model. It distinguishes true capital from life-incoherent or false capital.

Part V reframes efficiency as life-good provisioning. Rather than invoking a numbered principle abruptly, it presents McMurtry's account of ecological efficiency, physical input-output efficiency, and human development efficiency as the natural culmination of life-coherent provisioning.

Part VI deepens the peace dimension through Galtung's positive peace, reframing peace as the active reduction of avoidable life-harm.

Part VII brings in Maturana's relational biology to show that measurement, language, emotion, and conversation help conserve or transform worlds.

Part VIII presents the life-coherent framework for progress, organized around exposure, repair, margins, life-capacity, and flourishing.

Part IX proposes a life-coherent refinement of the Beyond GDP dashboard, adding life-value, life capital, civil commons, positive peace, planetary thresholds, repair capacity, margins, burden displacement, and capture analysis.

Part X presents the life-coherent action method.

Part XI develops the life-coherent conversation required to coordinate action through legitimate coexistence.

Part XII applies the framework across national planning, public health, climate and planetary health, economic policy, education, technology, work, and Small Island Developing States.

Part XIII proposes a research and measurement agenda.

Part XIV discusses the promise and risks of the Beyond GDP agenda.

Part XV concludes by reframing progress, wealth, peace, efficiency, and governance around life.

The argument can be summarized in one sentence:

**The Beyond GDP agenda widens the compass of progress; a life-coherent framework deepens that compass by grounding it in life-value, life capital, positive peace, ecological limits, civil commons, and the practical transformation of the conditions through which life is enabled or disabled.**

# Part II — The UN Beyond GDP Framework: A Necessary but Incomplete Advance

## 2. The UN's New Compass of Progress

The UN High-Level Expert Group on Beyond GDP enters the global conversation at a decisive moment. The crisis is not merely technical. It is civilizational. Modern societies have become highly capable of producing, measuring, trading, financing, extracting, digitizing, and accelerating economic activity, yet remain uncertain about whether this activity is generating lives worth living, communities worth belonging to, institutions worthy of trust, and planetary conditions capable of supporting the future.

The report *Counting What Counts: A Compass of Progress for People and Planet* is important because it marks an official recognition that the dominant measure of progress has become too narrow for the world it now influences. GDP remains useful as a measure of economic activity, but it cannot carry the moral, social, ecological, and intergenerational burden that modern institutions have placed upon it. The report states that GDP growth has coexisted with persistent inequality, environmental degradation, and declining trust in public institutions, and that GDP was never designed to capture the full range of outcomes that shape people's lives (High-Level Expert Group on Beyond GDP, 2026).

This is the opening. Once GDP is recognized as insufficient, the question becomes: what should guide public judgment, policy, and institutional accountability? The UN report answers by proposing that progress be understood as **equitable, inclusive, and sustainable well-being**. This formulation is already a major reorientation. It shifts the frame from economic output to lived conditions; from aggregate production to distribution; from present consumption to future viability; from national income to people and planet; and from a single number to a multidimensional dashboard.

Yet the report's importance lies not only in its content, but also in its institutional location. Because it is framed through the United Nations, the Pact for the Future, the Sustainable Development Goals, and the international statistical system, it gives global legitimacy to a claim long advanced by philosophers, public-health scholars, ecological economists, social movements, Indigenous traditions, and critics of development: economic growth is not the same as progress. The report therefore creates a doorway through which a deeper transformation can enter.

The question is whether the doorway will be used.

### 2.1 Foundational principles: peace, human rights, and respect for the planet

The UN report organizes its framework around three foundational principles: **peace, human rights, and respect for the planet**. This is a significant strength. It prevents the Beyond GDP agenda from becoming a merely subjective or technocratic well-being exercise. A society cannot

be considered genuinely progressive if it increases satisfaction while violating rights, increases income while destroying ecosystems, or improves service delivery while normalizing violence. By placing peace, rights, and planetary respect at the foundation, the report acknowledges that well-being requires prior moral, political, and ecological conditions.

The report's treatment of peace is especially noteworthy because it gestures beyond the narrow idea of peace as the absence of war. It recognizes peace as involving not only the absence of violence and physical insecurity, but also the broader structural conditions through which societies manage conflict, foster cooperation, and sustain well-being over time. This language moves in the direction of Galtung's distinction between negative and positive peace, even if the report does not fully develop its implications (Galtung, 1969, 1990).

Human rights similarly function as a boundary condition. They remind the framework that well-being cannot be reduced to aggregate satisfaction or national performance. Persons matter as rights-bearing beings, not merely as units of welfare, labor, consumption, or demographic reporting. The inclusion of human rights helps preserve dignity and agency against approaches that might otherwise optimize averages while sacrificing minorities, dissenters, migrants, women, children, Indigenous peoples, disabled persons, or future generations.

Respect for the planet is the third foundation. Here the report takes another important step by recognizing that the environment has both intrinsic value and instrumental relevance to human well-being. It also warns against a "sustainability mirage" in which gains in economic or human capital mask ecological degradation (High-Level Expert Group on Beyond GDP, 2026). This is crucial because one danger of capital-based frameworks is substitutability: the idea that losses in natural systems can be compensated by gains elsewhere.

Yet these foundations remain vulnerable because they are not yet integrated into a fully life-coherent theory. Peace is named, but not fully measured as the reduction of avoidable life-harm. Human rights are named, but not consistently grounded in universal life necessities and real affordances. Respect for the planet is named, but the living Earth still risks being absorbed into the language of natural capital. The foundations are therefore right, but underdeveloped. They point toward life-coherence without yet arriving there.

## 2.2 Current well-being: the widening of lived experience

The report's second major component is **current well-being**. This includes material conditions and work, health, education, security, subjective well-being, social cohesion, quality of institutions, and environmental quality. This is one of the strongest parts of the Beyond GDP framework because it makes visible the fact that progress is lived across multiple dimensions at once. People do not experience life as GDP. They experience life through whether they can breathe clean air, drink safe water, find meaningful work, secure shelter, care for children, trust institutions, walk safely, learn, sleep, heal, belong, and imagine a future.

This widening matters. A purely economic measure may count market transactions while ignoring whether people are exhausted, lonely, unsafe, excluded, or ecologically exposed. It may register increased production while missing the decline of health, meaning, trust, and

community. By including health, education, security, social cohesion, institutional quality, and environmental quality, the UN report makes it harder for governments to claim progress solely on the basis of economic growth.

Subjective well-being is also important. People's lived evaluations of their lives matter. A society cannot be understood only from outside through objective indicators. If people report loneliness, insecurity, distrust, dissatisfaction, or lack of meaning, those experiences must be heard. They reveal dimensions of life that material indicators alone may miss.

At the same time, subjective well-being must be interpreted carefully. People can adapt to deprivation. They can lower expectations under conditions of chronic scarcity. They can report satisfaction because alternatives are unimaginable. They can normalize exhaustion, humiliation, insecurity, or ecological loss. Conversely, people may express dissatisfaction precisely because they still retain a sense of dignity and possibility. Subjective well-being is therefore indispensable, but it cannot be the final arbiter of progress.

A life-coherent reading of current well-being asks a deeper question: what conditions are generating these experiences? If loneliness rises, what relational, urban, digital, economic, and cultural arrangements are producing disconnection? If institutional trust declines, what institutional practices have made distrust rational? If health worsens, what exposures, blocked repair pathways, depleted margins, and commercial determinants are involved? If education improves on paper but young people lose meaning, agency, ecological security, or future confidence, what has education been made to serve?

The UN dashboard widens the field of description. The life-coherent deepening asks for the generative relations beneath the description.

### 2.3 Equity and inclusion: from averages to unequal burdens

The third component, **equity and inclusion**, is essential because averages can conceal harm. A country may perform well in aggregate while particular groups bear concentrated burdens. Wealth may rise while poverty persists. Educational attainment may improve while regional exclusion deepens. Healthcare coverage may expand while quality remains stratified. Environmental quality may improve nationally while certain communities remain exposed to pollution, flooding, heat, or toxic industries.

The report recognizes this by including indicators of income inequality, wealth inequality, poverty, work inclusion, regional inequality, gender inequality, discrimination, and overlapping deprivation. It also emphasizes disaggregation. This is a major strength because progress that cannot be disaggregated can easily become a mask for injustice.

However, equity and inclusion require more than distributional measurement. They require an account of **why** burdens are distributed as they are. Inequality is not merely a statistical dispersion. It is produced through histories, institutions, laws, markets, infrastructures, norms, exclusions, and forms of power. Poverty is not merely low income. It is often the accumulated

result of denied access to life goods, insecure work, inadequate housing, poor public services, ecological vulnerability, educational disadvantage, and political marginalization.

A life-coherent framework therefore asks not only how unequal outcomes are, but how unequal exposure, unequal repair, and unequal margins are organized. Who is exposed to unsafe work, toxic environments, precarious housing, violence, poor food systems, debt, digital manipulation, or administrative burden? Who has access to sleep, care, therapy, green space, healthy food, legal protection, public knowledge, social trust, and institutional responsiveness? Who has reserves of time, money, energy, safety, and ecological stability? Who is forced to be resilient under conditions that should have been transformed?

Equity is not only about distribution after the fact. It is about the structure of life chances before harm occurs. Inclusion is not only participation in existing systems. It is the transformation of systems so that participation does not require self-erasure, over-adaptation, humiliation, or survival within life-disabling conditions.

## 2.4 Sustainability and resilience: capital, future well-being, and the problem of substitution

The fourth component of the UN framework is **sustainability and resilience**. This is where the report connects current well-being to future well-being through the measurement of capital stocks: produced, human, social, institutional, and natural capital. This is an important move because it recognizes that a society can appear to be doing well today while depleting the conditions required for tomorrow. A dashboard of present well-being is incomplete unless it asks whether the sources of well-being are being maintained, regenerated, or eroded.

Produced capital includes built and manufactured assets: infrastructure, housing, transport systems, energy systems, tools, machinery, digital infrastructure, and other forms of material capacity. Human capital includes health, knowledge, skills, and capabilities. Social capital includes trust, reciprocity, networks, and relational cooperation. Institutional capital includes laws, governance systems, public administration, rights-protecting structures, and organizational capacity. Natural capital includes ecosystems, biodiversity, water, soil, climate regulation, land, and other environmental assets.

The advantage of this model is that it makes visible forms of wealth that GDP either ignores or treats only indirectly. A society with strong infrastructure but collapsing trust is not truly wealthy. A society with high income but degraded ecosystems is not secure. A society with technological capacity but weak institutions is fragile. A society with educated people but no meaningful work, no public trust, and no ecological future is not flourishing.

Yet the capital language also carries danger. Capital is a powerful metaphor, but it can flatten living reality into asset categories. It can imply that different forms of capital are interchangeable. It can suggest that loss of ecosystems may be offset by increases in infrastructure, technology, or human skills. It can treat nature as a stock available for accounting rather than as the life-ground within which all human value arises. It can measure resilience as

the capacity to continue functioning under stress without asking whether the stress itself is unjust, avoidable, or life-disabling.

The UN report is aware of some of these dangers, especially in its warning against the sustainability mirage. But a deeper criterion is still needed. Not all capital is life capital. Some capital grows by extracting from life. Some capital appears productive while degrading the biological, social, ecological, and psychological conditions of flourishing. Some capital concentrates power. Some capital encloses commons. Some capital creates dependency. Some capital displaces burdens onto those who are not counted.

This is where McMurtry's life-value onto-axiology becomes indispensable. The question is not merely whether societies possess produced, human, social, institutional, and natural capital. The question is whether these forms of capital truly secure life goods and expand life-capacities through time without cumulative life-loss.

## 2.5 The strength of the dashboard approach

The dashboard approach has real strengths. It resists the tyranny of a single number. It allows progress to be seen across several domains at once. It can identify areas where a society is improving and areas where it is deteriorating. It can show trade-offs. It can reveal that a country's economic growth is accompanied by ecological loss, rising inequality, deteriorating health, declining trust, or worsening subjective well-being. It can support public debate by making visible what GDP hides.

It also has practical advantages. The UN report deliberately builds on existing indicators, especially the SDGs, to lower the barrier to implementation. This matters because a framework that is conceptually elegant but impossible for countries to populate will remain aspirational. By drawing from established statistical systems, the report increases the likelihood of uptake. It also recognizes the importance of national ownership, disaggregation, methodological guidance, statistical capacity, and progressive implementation (High-Level Expert Group on Beyond GDP, 2026).

This pragmatic orientation should be respected. A life-coherent critique must not become so pure that it becomes unusable. The world needs better measures now. Governments need practical tools. Statistical offices need implementable guidance. Communities need evidence. International organizations need shared baselines. Policy systems need ways to see beyond GDP.

The dashboard is therefore not the problem. The problem is what happens if the dashboard becomes the destination rather than the doorway.

## 2.6 The limitation of dashboard thinking

A dashboard can tell us what is happening. It cannot, by itself, tell us what is ultimately valuable, what must never be traded away, what forms of harm are being normalized, what kinds of capital

are false, what systems must be de-implemented, or what emotional and relational world is being conserved.

This is the central limitation.

A government may publish a dashboard showing inequality, loneliness, ecological degradation, institutional distrust, and health decline, yet continue policies that deepen those same conditions. A corporation may report sustainability indicators while expanding extractive supply chains. A development agency may measure inclusion while imposing administrative models that exclude local knowledge. A health system may measure patient satisfaction while increasing burden, fragmentation, and depersonalization. A country may improve selected indicators while exporting ecological damage, labor exploitation, waste, or climate risk elsewhere.

The risk is not that the UN Beyond GDP framework is false. It is that it may be **true but weak**: true enough to reveal the inadequacy of GDP, but weak enough to be absorbed into the existing machinery of institutional self-legitimation.

The limitation is understandable. A global framework must be politically usable, statistically feasible, and broadly applicable. Yet these constraints also mean that some of the most important generative dynamics of life-disabling systems remain underdeveloped. Structural violence is politically sensitive. Commercial capture is politically sensitive. Debt, extraction, tax avoidance, ecological burden-shifting, military expenditure, digital surveillance, fossil dependency, and commons enclosure are politically sensitive. If a framework avoids what is politically sensitive, it may measure symptoms while leaving causes intact.

A life-coherent framework does not reject feasibility, but it refuses to confuse feasibility with truth. It asks what must eventually become measurable, visible, discussable, contestable, and transformable if progress is to be real.

The movement beyond GDP is therefore necessary, but incomplete. It provides a wider compass. What remains needed is a deeper ground: a criterion of value, a theory of true and false capital, a fuller account of peace, a relational understanding of how worlds are brought forth, and a method for transforming life-disabling systems into life-enabling ones.

That deeper ground begins with life-value.

## Part III — The Missing Depth: From Measurement to Life-Value

### 3. What Is Progress For?

Every framework of progress rests on an answer to a prior question: **what is valuable?**

This question is often hidden. GDP hides it by presenting economic activity as if its increase were self-evidently desirable. Conventional development discourse often hides it by assuming that modernization, productivity, competitiveness, and income growth are the primary signs of improvement. Even multidimensional dashboards may hide it if they multiply indicators without clarifying the deeper criterion that makes one indicator matter more than another.

Yet no measurement system is value-neutral. Measurement is always guided by distinctions. It selects what counts and what does not count. It determines what becomes visible, comparable, governable, fundable, and actionable. It also determines what remains invisible, anecdotal, secondary, external, or expendable. The question is not whether values guide measurement. They always do. The question is whether those values are explicit, coherent, life-enabling, and accountable.

GDP's implicit answer is that monetized economic activity matters most. The Beyond GDP agenda gives a richer answer: well-being, equity, sustainability, peace, human rights, social cohesion, institutions, and the planet also matter. That is an indispensable widening. But a life-coherent framework asks a still deeper question: **why do these things matter?** What is the common ground that makes health, education, peace, equity, ecological integrity, institutional trust, care, and future viability valuable?

The answer proposed here is **life-capacity**.

Progress is real to the extent that it enables persons, communities, ecosystems, and future generations to live, heal, develop, relate, learn, participate, repair, create, belong, and flourish within the web of life. Progress is distorted to the extent that it expands output, wealth, power, institutional performance, technological control, or apparent well-being by disabling life-capacity elsewhere.

This is not a decorative ethical supplement to measurement. It is the condition of measurement's truth.

#### 3.1 The hidden ontology of progress

An ontology of progress defines what kind of world a progress framework assumes. GDP assumes a world of production, consumption, income, prices, sectors, markets, labor, investment, and national output. It sees what is monetized. It becomes less able to see unpaid care, ecological

regeneration, social trust, cultural meaning, community repair, spiritual life, or future viability unless these enter the economy as costs, services, or assets.

Beyond GDP assumes a wider world. It sees health, education, security, subjective well-being, social cohesion, institutions, environmental quality, inequality, poverty, and capital stocks. This is far richer. It recognizes that people and planet matter beyond market output. Yet it can still remain within an ontology of measurement and management: domains are identified, indicators are selected, data are reported, and policy is expected to respond.

A life-coherent ontology begins differently. It begins with living beings in relation. It asks how life is sustained, injured, repaired, burdened, enabled, disabled, and brought forth through recurrent relations among bodies, communities, institutions, technologies, cultures, and ecosystems. It understands persons not as isolated individuals whose well-being can simply be aggregated, but as living beings structurally coupled with air, water, food, shelter, care, work, family, language, culture, law, technology, institutions, histories, and the living Earth.

This shift changes the meaning of every domain. Health is no longer merely a sector. Education is no longer merely human capital formation. Work is no longer merely employment or productivity. Nature is no longer merely an asset. Technology is no longer merely innovation. Institutions are no longer merely governance capacity. Each becomes answerable to the same question: **does this relation enable life-capacity or disable it?**

### 3.2 McMurtry's primary axiom of life-value

John McMurtry's life-value onto-axiology provides a rigorous foundation for this question. Its primary axiom may be summarized as follows: something is valuable if, and to the extent that, it enables a more coherently inclusive range of thought, feeling, and action than would exist without it. Conversely, something is disvaluable if, and to the extent that, it reduces, disables, or destroys such ranges of life (McMurtry, 2011a, 2011b, 2018).

This formulation is powerful because it avoids reducing value to preference, price, utility, pleasure, productivity, status, institutional recognition, or market demand. It grounds value in the expansion of living capacity. Thought, feeling, and action are not abstract categories. They name the basic fields through which human beings experience, understand, choose, relate, create, suffer, repair, and participate.

In this sense, McMurtry's axiom gives the Beyond GDP agenda the evaluative ground it requires. Well-being is valuable because it enables fuller ranges of life. Equity is valuable because avoidable deprivation disables life-ranges. Sustainability is valuable because future life-ranges depend on present life-support systems. Peace is valuable because violence reduces, injures, or destroys life-ranges. Human rights are valuable because they protect the conditions through which persons can think, feel, act, participate, and flourish. The planet is valuable not only because it supports human preference, but because all human and non-human life-ranges arise within and through it.

The axiom also exposes false value. A commodity is not good merely because it sells. A technology is not good merely because it is adopted. A policy is not good merely because it is efficient. A capital stock is not good merely because it appreciates. An institution is not good merely because it persists. Each must be judged by whether it enables or disables life-capacity.

This is the decisive movement from measurement to life-value.

### 3.3 Life-capacity as the real measure of progress

Life-capacity names the real powers and conditions required for persons and communities to live, develop, repair, belong, participate, and flourish. It includes biological capacities such as survival, metabolism, movement, immunity, sleep, reproduction, and healing. It includes psychological and cognitive capacities such as attention, learning, meaning, memory, emotional regulation, imagination, and judgment. It includes relational capacities such as trust, belonging, care, love, recognition, and cooperation. It includes social and political capacities such as agency, participation, voice, dignity, legal protection, and self-governing choice. It includes ecological capacities such as access to clean air, water, food, land, biodiversity, climate stability, and meaningful relation with the living world.

This concept allows progress to be evaluated across domains without reducing them to one another. Health, education, peace, equality, ecological integrity, institutional trust, and meaningful work all matter because they participate in enabling life-capacity. Their value is not arbitrary. They are different expressions of life's capacity to continue, deepen, diversify, and flourish.

The earlier life-coherent health framework defines health as **life-capacity enabled**, healing as **life-capacity restored**, and flourishing as **life-capacity expressed in dignity, relation, meaning, participation, and ecological belonging** (Sahely, 2026). That formulation can now be extended from health to progress as a whole. The same logic applies to economies, institutions, technologies, education systems, legal systems, and ecological governance. They are life-coherent only when they enable life-capacity.

Progress, then, is not the expansion of system activity. It is the expansion of life-capacity.

This distinction is essential because systems can expand while life contracts. Markets can expand while care collapses. Technologies can expand while attention fragments. Institutions can expand while dignity declines. Cities can expand while belonging disappears. Production can expand while ecosystems degrade. Data can expand while wisdom diminishes. A life-coherent framework asks whether expansion is in service of life, or whether life is being reorganized in service of expansion.

### 3.4 Universal human life necessities

Life-capacity is not merely an abstract capacity. It depends on concrete life necessities. McMurtry's account of universal human life necessities gives content to what well-being must

secure. Human beings require breathable air, daily light, open space, clean water, nourishing food, sanitation, shelter, sleep space, life-supporting surroundings, intimate love, social inclusion, safety, healthcare when ill or infirm, language, education, art, play, meaningful work or service, and self-governing choice consistent with the provision of these goods for others (McMurtry, 2011a, 2011b, 2018).

This list matters because it prevents “well-being” from becoming vague. It also prevents progress from being defined by preference satisfaction alone. People may prefer many things, but some conditions are necessary for human life to unfold at all. Clean water is not merely a preference. Breathable air is not a lifestyle option. Shelter is not merely a commodity. Care is not a luxury. Education is not merely an investment in labor productivity. Meaningful work is not simply a source of income. Ecological surroundings are not amenities. Self-governing choice is not reducible to consumer choice.

A society is life-coherent to the extent that it secures these life necessities universally, sufficiently, and sustainably. It is life-incoherent to the extent that access to them is insecure, commodified in exclusionary ways, ecologically destructive, humiliating, or dependent on private purchasing power beyond the reach of many.

This gives the Beyond GDP framework a sharper standard. It is not enough to measure material conditions, health, education, and environmental quality as broad domains. The deeper question is whether the universal life necessities underlying those domains are actually secured. Are people housed in ways that allow sleep, safety, dignity, privacy, and family life? Is food nourishing, culturally appropriate, accessible, and ecologically sustainable? Is education enabling thought, imagination, participation, and life-range development? Is healthcare accessible as care, not merely as service throughput? Is work meaningful and compatible with health, family, care, and civic life? Are ecosystems protected as life-supporting conditions, not merely measured as assets?

### 3.5 Why this deepens Beyond GDP

The UN Beyond GDP framework asks societies to measure more of what matters. McMurtry’s life-value onto-axiology asks why those things matter and what makes them true goods. This is the deepening.

Beyond GDP says: include health, education, social cohesion, institutions, environment, equity, and sustainability.

Life-value says: these matter because they enable the ranges of thought, feeling, action, relation, repair, and participation through which human and ecological life becomes possible.

Beyond GDP says: measure produced, human, social, institutional, and natural capital.

Life-value says: these are true capital only if they reproduce life goods and expand life-capacity through time without cumulative life-loss.

Beyond GDP says: do not rely on GDP alone.

Life-value says: GDP is valid only where economic activity corresponds to the securing of life goods and the expansion of life-capacity.

This is the bridge to the next major step. Once life-value is accepted as the ground of progress, capital itself must be reinterpreted. We can no longer ask only how much capital a society has. We must ask whether its capital is true or false, life-enabling or life-disabling, regenerative or extractive, commons-protecting or commons-enclosing.

The next section therefore turns to life capital as the life-value deepening of the UN five-capitals framework.

# Part IV — Life Capital: Deepening the Five-Capitals Framework

## 4. From Capital Stocks to Life Capital

The UN Beyond GDP framework makes an important move by linking present well-being to future conditions through five forms of capital: produced, human, social, institutional, and natural. This is a significant advance over GDP because it recognizes that societies can consume, monetize, or report current gains while quietly depleting the conditions required for future well-being. A society may appear prosperous because its output is rising, yet be undermining its human health, social trust, institutional legitimacy, ecological stability, and capacity to respond to shocks. The five-capitals model helps make this depletion visible (High-Level Expert Group on Beyond GDP, 2026).

Yet this model also requires a deeper criterion. Capital is not automatically life-enabling. A stock of assets can grow while life-capacity declines. Infrastructure can expand while communities are displaced. Technology can advance while attention, privacy, agency, and dignity are captured. Human capital can increase in the sense of labor productivity while workers become exhausted, precarious, and replaceable. Social capital can take the form of exclusionary networks, elite privilege, or group domination. Institutional capital can protect existing power rather than justice. Natural capital can be framed as an asset class while the living Earth is subordinated to accounting logic.

The question, therefore, is not only whether societies possess multiple forms of capital. The deeper question is whether those forms of capital are truly life-enabling.

McMurtry's concept of **life capital** provides the needed clarification. In life-value onto-axiology, the primary capital of any society or economy is not money capital, productive capital, or financial capital, but the accumulated and regenerative wealth of life goods that sustain and expand life-capacities through time. Life capital is true capital because it produces more life without cumulative life-loss. It includes ecosystems, knowledge, care, health, education, public goods, social trust, life-protective institutions, and civil commons insofar as these enable human and planetary flourishing (McMurtry, 2011a, 2011b, 2018).

This concept does not simply add a sixth category to the UN framework. It reorders the meaning of capital itself. Produced, human, social, institutional, and natural capital become valid as progress indicators only when interpreted through the life-capital test. They are life-coherent when they secure life goods, expand life-capacity, regenerate through time, protect civil commons, respect ecological thresholds, and avoid burden displacement. They become life-incoherent, or false capital, when they grow by degrading bodies, communities, ecosystems, attention, care, dignity, or future possibility.

The shift is decisive:

**Capital is not what accumulates value in money terms. Capital is what reproduces life-value through time.**

## 4.1 The UN's five-capital model

The UN Beyond GDP report places sustainability and resilience within a capital framework. Future well-being depends on whether societies maintain and renew the stocks that make well-being possible. These stocks include produced capital, human capital, social capital, institutional capital, and natural capital. The report's purpose is to connect present outcomes with future capacity: a country may be doing well today only because it is drawing down the conditions needed for tomorrow (High-Level Expert Group on Beyond GDP, 2026).

Produced capital refers to built and manufactured assets: infrastructure, housing, transport systems, energy systems, tools, machinery, digital infrastructure, and other forms of material capacity. Human capital refers to the knowledge, skills, health, and capacities of people. Social capital refers to trust, cooperation, reciprocity, relationships, and networks. Institutional capital refers to the quality, legitimacy, capacity, fairness, and reliability of institutions. Natural capital refers to ecosystems, biodiversity, land, water, soil, climate regulation, and the environmental assets on which life depends.

This framework matters because it makes the economy more than a flow of income. It asks whether the underlying bases of well-being are being strengthened or eroded. It creates space to ask whether development is depleting natural systems, degrading institutions, weakening social trust, or underinvesting in human life.

But the five-capitals model still leaves open a fundamental problem: it describes categories of stock, but it does not fully determine whether those stocks are life-enabling or life-disabling. It identifies what must be counted, but not yet the full criterion by which capital is judged.

## 4.2 The danger of capital neutrality

The language of capital often carries an aura of neutrality. To call something capital is to imply that it is a stock of value capable of producing future benefit. But this assumption is dangerous. Some stocks produce future benefit for some while producing harm for others. Some forms of capital generate financial returns while degrading the life-ground. Some assets increase power without increasing life-capacity. Some institutions become durable precisely because they protect privilege. Some technologies become valuable in markets because they extract attention, data, dependence, or behavioral control.

Produced capital is not automatically life capital. A highway may improve mobility, but also fragment communities, increase pollution, deepen car dependency, and destroy ecosystems. A hospital may be a life-supporting institution, but if health systems are organized primarily around expensive downstream intervention while upstream causes are ignored, produced capital may expand alongside preventable disease. A luxury housing tower may add to produced capital

while worsening shelter insecurity. A data center may increase technological capacity while consuming water, energy, and land in ways that undermine local life conditions.

Human capital is not automatically life capital. A population may become more educated in ways that increase productivity while becoming more anxious, indebted, competitive, uprooted, and alienated. Training may increase employability while narrowing imagination. Skills may be developed for markets that damage ecological systems or manipulate human behavior. Health may be valued mainly because it maintains labor supply, not because persons are beings worthy of flourishing.

Social capital is not automatically life capital. Strong networks may support care, mutual aid, and belonging, but they may also enforce conformity, exclusion, caste, nepotism, corruption, racism, or gender domination. Trust within an in-group can coexist with hostility toward outsiders. Social cohesion can become oppressive if it silences dissent, hides abuse, or demands adaptation to injustice.

Institutional capital is not automatically life capital. Institutions may be stable but unjust, efficient but humiliating, lawful but exclusionary, trusted by some and feared by others. Bureaucracies may become skilled at managing symptoms while avoiding root causes. Legal systems may protect property more effectively than life. Administrative systems may shift burden onto the vulnerable while appearing procedurally neutral.

Natural capital is the most delicate category. The term can help policy recognize environmental assets, but it can also mislead by suggesting that nature is one stock among others, available for substitution or compensation. A forest is not merely carbon storage. A river is not merely water supply. A reef is not merely coastal protection. Soil is not merely productive substrate. These are living relations, habitats, evolutionary histories, cultural meanings, and conditions of planetary continuity. To treat them only as capital is to risk repeating the abstraction that made ecological degradation possible.

The life-capital criterion is therefore necessary because it asks: **what does this capital actually do to life?**

### 4.3 McMurtry's life capital

Life capital can be defined as the cumulative and regenerative stock of life goods, life-supporting relations, civil commons, ecological systems, knowledge, care, and capabilities that enable life-capacity to expand through time without cumulative life-loss.

This definition contains several elements.

First, life capital is not merely a stock; it is also a regenerative flow. It must be reproduced through time. Clean water systems, public health, education, care, food systems, trust, soil fertility, biodiversity, language, and democratic institutions do not persist automatically. They require maintenance, renewal, protection, learning, and intergenerational transmission.

Second, life capital is grounded in life goods. A life good is not simply something preferred, purchased, or consumed. It is a condition or means of life that enables life-capacity: air, water, nourishing food, shelter, sleep, care, health, education, safety, ecological surroundings, meaningful work, culture, play, participation, and self-governing choice.

Third, life capital expands life-capacity. It increases the real range of thought, feeling, action, agency, relation, participation, creativity, repair, and flourishing available to persons and communities.

Fourth, life capital must avoid cumulative life-loss. A system cannot be called capital in the true sense if it produces present benefit by degrading ecological systems, exhausting workers, displacing harm, enclosing commons, or undermining future life. Growth by depletion is not life capital. It is liquidation.

Fifth, life capital is inseparable from civil commons. Civil commons are shared life-support systems that secure access to life goods outside the exclusive logic of private purchasing power. Public health, clean water, public education, libraries, parks, ecological protections, care systems, public knowledge, legal rights, social security, and accountable governance are not mere expenditures. They are life-capital infrastructures.

This is why life capital is not a sixth category beside the UN's five capitals. It is the evaluative ground of all capital. Produced, human, social, institutional, and natural capital are life-coherent only insofar as they become life capital.

#### 4.4 True capital and life-incoherent capital

The distinction between life capital and life-incoherent capital is one of the most important contributions that life-value onto-axiology can make to the Beyond GDP agenda.

**Life capital** directly or indirectly secures life goods, expands life-capacity, strengthens civil commons, regenerates through time, respects planetary boundaries, and reduces avoidable life-loss.

**Life-incoherent or false capital** accumulates monetary, institutional, technological, or political power while disabling life-capacity, degrading ecosystems, enclosing commons, increasing dependency, displacing burdens, or breaching life-ground thresholds.

This distinction allows us to see what GDP cannot see. GDP counts market activity regardless of whether that activity heals or harms. It may count the sale of ultra-processed foods, pollution cleanup, private security, medical treatment for preventable disease, rebuilding after disasters, addictive technologies, weapons production, and speculative financial transactions as additions to economic activity. It does not ask whether the activity expands or reduces life-capacity.

Beyond GDP improves this by measuring more domains, but life capital goes further. It asks whether the underlying assets and activities of society are genuinely wealth-producing in life terms.

A society may accumulate life-incoherent capital in many ways. It may build infrastructure that intensifies fossil dependence. It may expand private healthcare while public health deteriorates. It may increase housing wealth while people lose access to shelter. It may grow digital platforms that monetize attention while undermining mental health, privacy, and democratic discourse. It may increase educational credentials while narrowing creativity and meaning. It may expand agricultural output through soil depletion, pesticide exposure, and biodiversity loss. It may increase tourism revenues while degrading reefs, water systems, local housing access, and cultural integrity.

The life-capital test reveals these contradictions. It asks whether capital is producing life goods or merely producing returns.

#### 4.5 Produced capital through the life-capital test

Produced capital becomes life capital only when built systems, tools, infrastructure, technologies, and material assets expand access to life goods with minimal harm.

Housing is produced capital when it provides safe, dignified, affordable, climate-resilient shelter that supports sleep, family life, privacy, community, and belonging. It becomes life-incoherent capital when housing is primarily treated as an investment vehicle, driving exclusion, debt, displacement, overcrowding, or homelessness.

Transport is produced capital when it enables access to work, education, care, food, culture, nature, and civic life while reducing pollution, danger, time burden, and ecological damage. It becomes life-incoherent capital when it locks societies into congestion, emissions, land consumption, injury, isolation, and car dependency.

Energy infrastructure is produced capital when it provides reliable, affordable power while respecting climate stability, ecosystem integrity, and community rights. It becomes life-incoherent capital when it secures present convenience through future destabilization.

Digital infrastructure is produced capital when it expands knowledge, communication, care, participation, and democratic access. It becomes life-incoherent capital when it extracts attention, manipulates behavior, concentrates power, amplifies misinformation, surveils populations, or increases dependency without accountability.

The life-capital question for produced capital is therefore: **does this built asset expand universal access to life goods while reducing cumulative life-loss?**

#### 4.6 Human capital through the life-capital test

Human capital becomes life capital only when the development of knowledge, skill, health, creativity, and capability expands the range of human life, not merely the productivity of labor.

The term “human capital” is useful but dangerous. It can reduce persons to economic assets. It can value education because it increases earnings, health because it sustains productivity, and skill because it improves competitiveness. A life-coherent framework does not deny that education, health, and skill contribute to economic life. It refuses to make economic utility their highest meaning.

Education is life capital when it expands thought, imagination, judgment, language, relational understanding, ecological literacy, ethical discernment, practical competence, and democratic participation. It is diminished when it becomes primarily credential competition, labor-market sorting, test performance, or adaptation to systems that students had no role in shaping.

Health is life capital when it enables persons to live, repair, relate, participate, and flourish. It is diminished when health is valued only as productivity, cost containment, or risk management. The life-coherent health framework is relevant here because it defines health as life-capacity enabled and healing as life-capacity restored, thereby resisting reduction of health to service output or disease absence (Sahely, 2026).

Skill is life capital when it increases agency, meaningful contribution, creativity, cooperation, and the ability to meet real life needs. It becomes distorted when skills are developed for industries or systems that disable life-capacity elsewhere.

The life-capital question for human capital is therefore: **does this development expand human life-capacity, dignity, agency, care, creativity, and participation, or merely increase market usefulness?**

#### 4.7 Social capital through the life-capital test

Social capital becomes life capital when relationships, trust, reciprocity, networks, and cultural practices support inclusive cooperation, care, belonging, mutual recognition, and repair.

This matters because human beings are relational beings. Health, learning, security, meaning, resilience, and participation depend deeply on social relations. Trust lowers fear. Belonging regulates stress. Care supports healing. Cooperation allows communities to solve problems that individuals cannot solve alone. Shared meaning gives life continuity and purpose.

But social capital can also become life-incoherent when networks exclude, dominate, exploit, or protect privilege. A corrupt patronage network is social capital for insiders but life-disabling for those excluded. A discriminatory community may have strong internal cohesion while degrading the dignity and safety of others. A professional network may reproduce class privilege. A political faction may build loyalty through fear and misinformation. A culture may enforce silence around abuse in the name of unity.

Therefore social cohesion is not automatically good. The life-capital test asks whether cohesion is life-inclusive, dignity-preserving, and repair-capable. Social relations become life capital when they widen the circle of legitimate coexistence rather than narrowing it.

The life-capital question for social capital is: **does this network of relation expand inclusive trust, care, belonging, participation, and repair, or does it secure advantage by exclusion?**

#### 4.8 Institutional capital through the life-capital test

Institutional capital becomes life capital when laws, governance systems, public services, norms, and organizations protect life goods, secure rights, enable participation, repair harm, and hold power accountable.

Institutions are among the most powerful determinants of life-capacity because they structure access. They decide who receives care, who is protected, who is heard, who is believed, who is burdened, who is punished, who is excluded, and who can appeal. They shape whether rights are real or merely formal. They determine whether commons are protected or privatized. They regulate markets, technologies, land, labor, education, health, and ecological systems.

Yet institutions can also become life-disabling. They may impose administrative burden on those least able to carry it. They may humiliate people seeking help. They may protect property more strongly than people. They may measure compliance rather than care. They may fragment services in ways that make repair impossible. They may preserve historical injustice through apparently neutral procedures. They may appear efficient by shifting work onto families, communities, or future generations.

Institutional capital therefore cannot be judged only by public confidence or service satisfaction. The deeper question is institutional trustworthiness. Are institutions worthy of trust? Do they reduce burden? Do they repair harm? Do they protect the vulnerable? Do they allow contestation? Do they learn? Do they de-implement harmful practices? Do they strengthen civil commons?

The life-capital question for institutional capital is: **does this institution protect and expand life-capacity through justice, access, repair, accountability, and commons protection?**

#### 4.9 Natural capital, life-ground, and non-substitutability

Natural capital requires the strongest clarification because nature is not merely capital. The living Earth is the life-ground of all value. Air, water, soil, oceans, forests, reefs, climate stability, biodiversity, pollinators, microbial ecologies, and biogeochemical cycles are not external supports to the economy. They are the conditions within which human life, society, and economy exist at all.

The UN Beyond GDP report recognizes respect for the planet as a foundational principle and acknowledges the danger of ecological degradation being masked by other forms of capital accumulation (High-Level Expert Group on Beyond GDP, 2026). This is a crucial opening. But life-coherence requires an even stronger principle: life-ground thresholds are non-substitutable. They cannot be traded away in exchange for produced capital, financial returns, or short-term well-being gains.

A reef cannot be replaced by a hotel. A watershed cannot be replaced by bottled water markets. Climate stability cannot be replaced by insurance. Soil fertility cannot be replaced indefinitely by chemical inputs. Biodiversity cannot be replaced by technological optimism. The extinction of species, collapse of ecosystems, or destabilization of climate systems are not ordinary losses within a portfolio. They are ruptures in the conditions of life.

Natural capital becomes life capital only when it is protected as life-ground. This means safeguarding ecological integrity not only for human use, but also because living systems have value beyond immediate economic utility. It means recognizing that planetary boundaries are not policy preferences. They are conditions of continued coexistence.

The life-capital question for natural capital is: **does this relation sustain the living systems that make all life-capacity possible, within non-negotiable ecological thresholds?**

#### 4.10 The life-capital audit

A life-coherent Beyond GDP framework should therefore include a life-capital audit for every form of capital. Such an audit would not replace existing indicators. It would interpret them through a deeper criterion.

The audit would ask seven questions.

**First, the life-good test:**

Does this capital secure universal human life necessities such as air, water, food, shelter, care, health, education, safety, meaningful work, ecological surroundings, and self-governing choice?

**Second, the life-capacity test:**

Does it expand the real range of thought, feeling, action, agency, dignity, creativity, care, participation, repair, and flourishing?

**Third, the access test:**

Is access universal, equitable, dignified, and protected, or dependent on private purchasing power, privilege, status, location, or exclusionary systems?

**Fourth, the reproduction-through-time test:**

Does it regenerate life goods through time without cumulative ecological, social, biological, psychological, or institutional loss?

**Fifth, the civil commons test:**

Does it strengthen shared life-support systems, or does it privatize, enclose, weaken, or commodify them?

**Sixth, the burden-displacement test:**

Does it export costs onto workers, caregivers, marginalized communities, ecosystems, other countries, or future generations?

**Seventh, the life-incoherent capital test:**

Does it grow monetarily, technologically, or institutionally while disabling life-capacity?  
This corresponds to what McMurtry's framework exposes as false capital: accumulation that appears valuable while reducing life-capacity.

These questions transform the five-capitals model. They prevent capital from being treated as neutral. They reveal whether capital is genuinely life-generating or merely system-expanding. They allow the Beyond GDP agenda to move from sustainability accounting toward life-coherent discernment.

The conclusion is simple but far-reaching:

**Produced, human, social, institutional, and natural capital are not automatically life capital. They become life capital only when they secure life goods and expand life-capacities through time without cumulative life-loss.**

Once this is understood, efficiency must also be redefined. If capital is true only when it enables life, then efficiency is true only when it increases life goods while reducing life-loss. The next section therefore turns to life-coherent efficiency: the movement from output productivity to life-good provisioning.

# Part V — Life-Coherent Efficiency: From Output Productivity to Life-Good Provisioning

## 5. Reclaiming Efficiency for Life

Efficiency is one of the most powerful words in modern public life. It carries an aura of rationality, necessity, and inevitability. Policies are justified in its name. Institutions are reorganized in its name. Workers are disciplined in its name. Technologies are adopted in its name. Public services are cut, privatized, automated, consolidated, or restructured in its name. In economic discourse, efficiency often appears as if it were beyond moral dispute: to be efficient is to use fewer inputs for greater outputs, reduce waste, increase productivity, lower cost, improve return, accelerate delivery, or maximize value.

Yet the question usually left unasked is: **efficient for what, for whom, and at whose expense?**

A system may be efficient at increasing profit while inefficient at sustaining health. It may be efficient at reducing public expenditure while inefficient at protecting families from burden. It may be efficient at moving goods while inefficient at protecting air, climate, biodiversity, and community life. It may be efficient at extracting attention while inefficient at supporting agency, learning, mental health, and democratic deliberation. It may be efficient at producing more commodities while inefficient at securing the life necessities people actually require.

The problem is not efficiency itself. Life requires efficiency. No living system can endure if it wastes energy, destroys its medium, or consumes its own conditions of renewal. The problem is false efficiency: the appearance of efficiency produced by narrowing the accounting frame, excluding real costs, displacing burdens, degrading commons, exhausting people, or liquidating ecological systems. What appears efficient inside a budget, firm, platform, ministry, or market may be profoundly inefficient in life terms.

McMurtry's principles of life-coherent provisioning culminate in a redefinition of efficiency. Efficiency does not increase merely when profit margins rise, costs fall, or outputs expand. It increases only when life goods are provided with diminishing ecological waste, reduced material and energy burden, less mandatory life-time loss, and expanded human development. This shifts efficiency from the service of accumulation to the service of life.

A life-coherent framework therefore asks not only whether a process produces more, faster, or cheaper. It asks whether the process secures more life goods with less life-loss.

### 5.1 The conventional meaning of efficiency

In conventional economic and administrative language, efficiency is usually defined as the relation between inputs and outputs. Fewer inputs for the same output, or greater output from the same input, is treated as improvement. In firms, this may mean reduced labor costs, faster production, higher returns, lower overhead, leaner inventory, automation, or increased

throughput. In public administration, it may mean shorter processing times, fewer staff, lower expenditure, standardized procedures, digital self-service, and measurable performance targets. In health systems, it may mean shorter hospital stays, more consultations per hour, reduced cost per patient, increased service volume, or better performance on selected indicators.

These forms of efficiency can be useful. Waste should not be romanticized. Public systems should not be careless with scarce resources. Slow, duplicative, poorly coordinated, corrupt, or unresponsive institutions can produce real harm. A life-coherent framework does not defend inefficiency in the sense of waste, confusion, avoidable delay, unnecessary complexity, or institutional inertia.

But conventional efficiency becomes dangerous when the output is poorly defined, when the input excludes unpaid or displaced burdens, when ecological costs are externalized, when quality is reduced to what can be easily counted, and when human beings are treated as cost centers rather than living participants.

A hospital may appear more efficient by discharging patients earlier while families absorb unmeasured care burdens. A welfare system may appear more efficient by digitizing applications while vulnerable people are excluded by complexity. A workplace may appear more efficient by using algorithmic scheduling while workers lose sleep, predictability, family time, and health. A food system may appear more efficient by producing cheap calories while increasing metabolic disease, ecological degradation, and loss of local food sovereignty.

The issue is not whether inputs and outputs matter. The issue is whether the right inputs and outputs are being counted. If the output is profit or service volume and the input excludes ecosystems, care, dignity, time, attention, trust, and future viability, efficiency becomes a mechanism of life-blindness.

## 5.2 False efficiency and burden displacement

False efficiency works by narrowing the frame.

It defines the output in terms useful to the system: profit, production, service volume, administrative throughput, compliance, growth, or selected performance indicators. It defines the input narrowly: paid labor, capital cost, energy cost, time to completion, or budget expenditure. It then ignores what has been displaced beyond the frame.

A company cuts labor costs by increasing work intensity. Profit per employee rises, but fatigue, injury, family strain, burnout, and health costs rise elsewhere. A government reduces hospital expenditure by shortening admissions, but unpaid caregivers absorb more complex care. A digital platform reduces transaction costs, but users perform unpaid labor, surrender data, lose attention, and become behaviorally profiled. A municipality saves money by postponing infrastructure maintenance, but future residents inherit higher risk. A country increases GDP through resource extraction, but downstream communities inherit polluted water, degraded land, disease, and ecological instability.

In each case, the system looks efficient because it has exported part of its cost. It has not eliminated burden. It has moved burden. It has not created life-value. It has converted uncounted life-loss into counted performance.

This is one of the central reasons the Beyond GDP agenda requires life-coherent deepening. The UN dashboard can reveal some consequences of false efficiency: worsening health, inequality, environmental degradation, declining trust, or poor subjective well-being. But a life-coherent framework allows the deeper critique: the process itself is inefficient if it produces these harms. The harms are not merely external side effects of an otherwise efficient system. They are evidence that the system's efficiency claim is incomplete or false.

A life-coherent efficiency test therefore asks:

Does this process increase life goods, or merely increase output?

Does it reduce real waste, or merely shift waste elsewhere?

Does it save time for life, or extract time from life?

Does it reduce labor burden, or move labor into unpaid homes and communities?

Does it increase access, or increase dependence?

Does it protect ecological systems, or silently consume them?

Does it expand human capacity, or intensify adaptation to harm?

Efficiency must be judged by the whole organism–niche relation, not by the internal accounting of the institution.

### 5.3 Three domains of life-coherent efficiency

McMurtry's life-value framework allows efficiency to be understood through three interrelated domains: ecological efficiency, physical input-output efficiency, and human development efficiency.

**Ecological efficiency** asks whether inputs and throughputs enable the provision of life goods with diminishing waste and externalities. It is concerned with whether production, consumption, infrastructure, and technology reduce pollution, toxicity, extraction, ecosystem harm, and life-ground degradation while securing what life actually needs.

**Physical input-output efficiency** asks whether fewer materials, less energy, less space, and less mandatory labor time can produce the same or greater means of life. It is concerned with material sufficiency, design intelligence, durability, repairability, circularity, and the liberation of time from unnecessary toil.

**Human development efficiency** asks whether productive arrangements expand the capabilities of persons and communities: knowledge, health, free time, dignity, agency, creativity, care, participation, and life-range choice. It is concerned with whether systems develop human beings or consume them.

These efficiencies are not separate silos. They reinforce one another. Ecological efficiency protects the life-ground. Physical input-output efficiency reduces unnecessary throughput. Human development efficiency expands the persons and communities who can participate in life-coherent design, repair, governance, and meaning-making.

A process that improves one while destroying the others is not fully efficient. A factory that reduces material waste but degrades workers is not life-efficient. A digital system that saves institutional time but destroys attention and agency is not life-efficient. A school that increases test performance while narrowing curiosity, play, civic imagination, and mental health is not life-efficient. A climate project that reduces emissions while displacing communities or destroying local livelihoods is not life-efficient.

Real efficiency must serve life across levels.

## 5.4 Ecological efficiency

Ecological efficiency means providing life goods with diminishing ecological harm. It asks how much nourishment, shelter, mobility, knowledge, care, safety, health, and meaningful participation can be secured per unit of carbon, toxicity, land disruption, biodiversity loss, water use, waste, and ecosystem damage.

This is not the same as producing more commodities with somewhat less pollution. A system may improve relative efficiency while expanding total harm. Production may become less carbon-intensive per unit while total production rises so much that emissions still increase. Agriculture may increase yield while degrading soil, poisoning waterways, reducing biodiversity, and weakening local food resilience. Tourism may become more energy-efficient per visitor while increasing total pressure on water, waste systems, reefs, housing, and culture.

Ecological efficiency must therefore be judged against life-ground thresholds. It is not enough to reduce harm relative to output if absolute harm continues to breach planetary boundaries or local ecological limits. Ecological efficiency asks whether provisioning remains within the regenerative capacities of the living systems on which it depends.

The UN Beyond GDP framework partly addresses ecological efficiency through indicators related to greenhouse gas emissions, biodiversity, air quality, water access, environmental quality, and natural capital. It also recognizes that sustainability cannot be assumed when natural systems are degraded while other forms of capital accumulate (High-Level Expert Group on Beyond GDP, 2026).

The life-coherent deepening adds a sharper test: ecological indicators should not only tell us whether the environment is worsening or improving. They should tell us whether societies are

securing life goods with diminishing ecological loss. The unit of analysis becomes **life-good per life-ground burden**, not output per environmental cost.

This matters especially for Small Island Developing States, coastal communities, and ecologically vulnerable regions. A tourism economy may appear successful by GDP and employment measures while degrading reefs, beaches, water systems, local food systems, housing access, and climate resilience. A life-coherent efficiency test would ask whether tourism is increasing life goods for residents and ecosystems, or whether it is converting life-ground into revenue while displacing costs into the future.

Ecological efficiency therefore requires moving from “How can growth be made greener?” to “What forms of provisioning meet life needs while regenerating the living systems that make provision possible?”

## 5.5 Physical input-output efficiency

Physical input-output efficiency asks whether societies can secure the same or greater life goods with fewer materials, less energy, less space, less waste, less complexity, and less mandatory work time.

This form of efficiency challenges the growth bias of modern economies. If the goal is life goods rather than commodity throughput, then many forms of reduction become progress. Less unnecessary commuting can be progress if people gain time, health, family life, and lower emissions. Less material consumption can be progress if products are durable, repairable, shared, and sufficient. Less work time can be progress if life necessities are secured and persons gain time for care, learning, civic participation, rest, play, and ecological restoration. Less administrative complexity can be progress if people can access support without humiliation or exhaustion.

Conventional systems often confuse more with better. More services, more transactions, more infrastructure, more credentials, more procedures, more data, and more consumption are treated as signs of development. But life-coherent efficiency asks whether the means have become excessive relative to the life goods they are supposed to serve.

A healthcare system that requires many appointments, forms, referrals, medications, insurance interactions, and digital portals may appear highly active while placing enormous burdens on patients and caregivers. A simpler system that restores continuity, primary care, prevention, trust, and access may produce more life-good with less throughput. An education system that creates intense competition, testing, debt, and credential inflation may produce measurable achievement while consuming childhood, play, curiosity, and mental health. A more life-efficient education system would produce deeper learning, agency, and participation with less coercive pressure.

Physical input-output efficiency therefore includes time. Time is not merely an economic input. It is a life medium. A system that saves institutional time by consuming the time of patients, parents, workers, or citizens is not necessarily efficient. It may simply have moved the cost.

A life-coherent measure would ask:

How much clean water is secured per unit of infrastructure, energy, chemical input, and ecological burden?

How much health is generated per unit of medical intervention, administrative complexity, and patient burden?

How much learning is generated per unit of stress, screen time, testing, cost, and childhood compression?

How much mobility is generated per unit of land use, carbon, injury, commute time, and community fragmentation?

How much nourishment is generated per unit of soil depletion, pesticide exposure, transport burden, waste, and disease?

This shifts efficiency from throughput optimization to life-good sufficiency.

## 5.6 Human development efficiency

Human development efficiency asks whether systems increase the capabilities of persons and communities in ways that expand life goods, life time, and life-range choices. It is the most direct expression of life-value because it asks whether the economy develops people or consumes them.

A life-coherent society is not efficient if people must sacrifice health, sleep, dignity, family, culture, ecological belonging, or meaning in order for the system to function. It is not efficient if children are educated into anxiety rather than understanding. It is not efficient if workers produce more while losing agency, time, and health. It is not efficient if caregivers sustain society while being economically invisible and personally exhausted. It is not efficient if communities become dependent on systems they cannot understand, govern, repair, or contest.

Human development efficiency asks whether arrangements expand the range of thought, feeling, and action. Do people understand the systems affecting them? Can they participate in decisions? Do they have time to care, learn, rest, create, and engage? Are they healthier, safer, more capable, more connected, and more dignified? Does technology expand agency or reduce it? Does work develop skill and meaning or merely extract performance? Do institutions teach citizens that they matter, or that they are burdens to be processed?

The UN Beyond GDP dashboard comes closest to this dimension through indicators on health, education, work, subjective well-being, social cohesion, inequality, poverty, public-service satisfaction, and youth not in education, employment, or training. These are essential. The life-coherent framework deepens them by asking whether capabilities are expanding as lived powers of persons and communities, not merely as inputs into productivity or employability.

Human development efficiency also requires attention to repair. Human beings cannot be developed by being continuously depleted. Systems that require chronic overwork, sleep deprivation, emotional suppression, debt, precarity, or constant adaptation to instability are humanly inefficient even if they increase output.

The life-coherent health framework makes this point through the exposure–repair–margins logic: health and flourishing are sustained when exposures remain within restorative capacity, while breakdown becomes more likely when cumulative exposures exceed repair margins (Sahely, 2026). This logic applies beyond health to society as a whole. A humanly efficient system protects the margins through which persons can recover, learn, care, participate, and renew.

## 5.7 Why Beyond GDP needs an explicit efficiency layer

The UN Beyond GDP framework contains several ingredients of life-coherent efficiency, but it does not yet integrate them into a theory of efficiency. It measures environmental conditions, health, education, work, inequality, institutions, and capital stocks. It recognizes sustainability and resilience. It widens the field of what matters. But it does not yet systematically ask whether societies are producing more life goods with less life-loss.

This is an important distinction.

The dashboard can tell us whether air quality is poor, but not necessarily whether the economy is securing mobility, housing, food, and work through ecologically efficient forms of provisioning. It can tell us whether people are underemployed, but not whether work leaves time and energy for care, learning, repair, and civic life. It can tell us whether education levels are rising, but not whether education expands life-range or merely produces credentials for competition. It can tell us whether institutions are trusted, but not whether institutions reduce burdens or displace them. It can tell us whether natural capital is declining, but not whether production systems are fundamentally life-efficient.

A life-coherent efficiency framework would therefore complement Beyond GDP by asking not only **what outcomes exist**, but **how those outcomes are produced**.

Are health gains produced through expensive downstream treatment of preventable disease, or through life-enabling conditions that reduce exposure and support repair?

Are educational gains produced through joyful development and capability expansion, or through pressure, inequality, and credential inflation?

Are economic gains produced through meaningful contribution, or through extraction, ecological depletion, and care exhaustion?

Are institutional efficiencies achieved by reducing real burden, or by shifting burden onto citizens?

Are sustainability gains achieved through genuine transformation, or through accounting adjustments and burden displacement?

This transforms efficiency from an economic measure into a life-value measure.

## 5.8 A proposed life-coherent efficiency module

A life-coherent refinement of Beyond GDP should include an explicit **life-coherent efficiency module**. This module would not replace existing indicators. It would interpret them through the question of life-good provision with diminishing life-loss.

The module would include three domains.

### **Ecological efficiency:**

How much genuine life-good is secured per unit of carbon emissions, toxicity, water use, land disruption, biodiversity loss, waste, and ecosystem stress? Are production and consumption patterns reducing absolute ecological harm while maintaining or improving access to life necessities? Are life-ground thresholds being respected?

### **Physical input-output efficiency:**

How much life necessity is secured per unit of material throughput, energy use, infrastructure burden, space, administrative complexity, and mandatory labor time? Are systems becoming simpler, more durable, more repairable, more circular, and less burdensome? Are they freeing time for life?

### **Human development efficiency:**

How much does the system expand health, knowledge, dignity, agency, care, creativity, participation, free time, relational trust, and repair capacity? Are people becoming more capable of living well, or merely more usable by systems?

The module would also include a negative test:

**No process is efficient if it increases output, profit, speed, or institutional performance by degrading life-capacity, enclosing commons, displacing burden, breaching ecological thresholds, or normalizing preventable harm.**

This test is crucial because it prevents false efficiency from masquerading as progress. It also gives policymakers a practical way to evaluate reforms. A digital transformation is efficient only if it reduces burden and expands access without excluding vulnerable people. A health reform is efficient only if it improves healing, dignity, continuity, and prevention rather than merely reducing cost. An economic policy is efficient only if it expands life goods and life-capacity without ecological overshoot or burden displacement. A climate transition is efficient only if it protects both planetary systems and the communities whose lives are reorganized by the transition.

Life-coherent efficiency therefore reclaims one of the central terms of modern governance. It does not reject efficiency. It restores efficiency to life.

The resulting principle can be stated simply:

**Efficiency is real only when it increases life goods and life-capacity with less waste, less harm, less coercion, less burden displacement, and less life-loss.**

This principle prepares the next movement. Even life capital and life-coherent efficiency remain incomplete if the framework does not confront peace and harm. For societies often call harm by other names: necessity, growth, order, competitiveness, resilience, tradition, security, or progress. A life-coherent framework must therefore deepen peace itself. It must move beyond the absence of war toward the active reduction of avoidable life-harm and the protection of conditions for legitimate coexistence.

## Part VI — Positive Peace and Life-Capacity: From Conflict Absence to the Reduction of Avoidable Life-Harm

### 6. From negative peace to life-coherent peace

No framework of progress can be adequate if it does not understand peace. A society may be wealthy, technologically advanced, administratively sophisticated, and statistically well measured, yet still be organized through relations that injure, degrade, exclude, humiliate, exploit, abandon, or slowly destroy the conditions of life. Such a society may not be at war, but it is not truly at peace.

The UN Beyond GDP framework rightly includes peace as a foundational principle. This is an important decision. It prevents progress from being reduced to economic, subjective, or environmental indicators alone. It also recognizes that well-being cannot be sustained where violence, insecurity, fear, and conflict dominate social life. In the report's proposed dashboard, peace appears among the foundational principles, alongside human rights and respect for the planet (High-Level Expert Group on Beyond GDP, 2026).

Yet peace requires more than the absence of armed conflict or the reduction of conflict-related deaths. These are essential, but they do not capture the many ways in which social arrangements can constrain life without appearing as war. They do not capture preventable hunger, unsafe housing, ecological poisoning, humiliating institutions, chronic insecurity, discriminatory systems, exploitative work, commercial manipulation, digital exclusion, or cultural narratives that make suffering appear normal.

This is why Johan Galtung's work remains indispensable. Galtung widened the meaning of peace by widening the meaning of violence. He showed that violence is not limited to direct physical injury. It can be built into social structures, and it can be legitimized by culture. It can appear as unequal life chances, preventable suffering, and avoidable constraints on human development (Galtung, 1969, 1990).

A life-coherent framework translates this insight into the language of life-capacity. Peace is present where avoidable life-harm is reduced and where the conditions of dignity, care, repair, participation, and ecological continuity are protected. Peace is absent where preventable arrangements degrade or constrain life-capacity, even if no formal war is occurring.

Peace, then, is not merely the silence of weapons. It is the active presence of life-enabling relations.

#### 6.1 The UN's peace indicator

The UN framework's inclusion of peace is significant, but its operationalization remains necessarily limited by the demands of global measurement. Conflict-related deaths are a vital indicator. War, armed conflict, organized violence, and lethal insecurity are among the most

obvious destroyers of life. A progress framework that ignored them would be morally incoherent.

However, conflict-related deaths measure only one part of peace. They measure what Galtung would call negative peace: the absence or reduction of direct violence. Negative peace is necessary. People must be protected from war, homicide, assault, coercion, and physical insecurity. Yet negative peace does not by itself guarantee the presence of just, dignified, and life-enabling conditions.

A country may have few conflict-related deaths and still be deeply unpeaceful. It may have high rates of gendered violence, child abuse, food insecurity, institutional humiliation, preventable disease, ecological exposure, unsafe labor, youth despair, community fragmentation, or public distrust. It may have order without justice. It may have stability without dignity. It may have silence without repair.

The UN report's wider prose gestures toward structural conditions of peace, but the dashboard cannot fully carry that insight if peace remains primarily represented through direct conflict mortality. This is not a reason to reject the framework. It is a reason to deepen it.

## 6.2 Galtung's distinction between negative and positive peace

Galtung's distinction between negative and positive peace provides the conceptual bridge. Negative peace refers to the absence of direct violence, especially war or physical attack. Positive peace refers to the presence of social conditions that reduce structural violence and allow human beings to develop more fully (Galtung, 1969).

This distinction is crucial because a society can suppress overt violence while preserving the arrangements that generate preventable suffering. A state may maintain order while tolerating poverty, exclusion, hunger, environmental degradation, and humiliation. A workplace may avoid open conflict while organizing life through fear and exhaustion. A family may appear stable while concealing abuse. A culture may appear cohesive while silencing those who suffer. A global economy may appear peaceful while displacing ecological and labor burdens onto distant populations.

Positive peace asks whether life can unfold without preventable disabling. It asks whether people have access to the conditions of dignity, safety, nourishment, care, participation, and future possibility. It asks whether institutions manage conflict in ways that repair relations, or suppress conflict in ways that preserve domination.

A life-coherent framework extends positive peace by grounding it in life-capacity. Peace is present where social, ecological, technological, and institutional relations enable life to live, heal, participate, repair, and flourish. Peace is absent where avoidable arrangements constrain these capacities, even if social quietude is maintained.

### 6.3 Structural violence as life-capacity reduction

Structural violence refers to harm built into social arrangements. It is not necessarily the result of a single identifiable perpetrator. It appears when institutions, policies, markets, infrastructures, and social hierarchies predictably produce preventable suffering or unequal life chances.

In life-coherent terms, structural violence is avoidable life-capacity reduction.

It includes food systems that produce hunger and metabolic disease while generating profit. It includes housing systems that produce homelessness, overcrowding, insecurity, and debt while treating shelter primarily as an asset class. It includes labor systems that require exhaustion, precarity, and unsafe conditions. It includes health systems that treat downstream disease while leaving upstream causes untouched. It includes educational systems that sort and humiliate rather than cultivate life-capacity. It includes legal systems that protect property more reliably than dignity. It includes economic systems that externalize ecological harm while counting extraction as growth.

Structural violence is often normalized because it is not experienced as a single event. It is experienced as a life condition. People are told to adapt, cope, compete, comply, become resilient, or make better choices. But the deeper question is why they are being asked to adapt to preventable harm.

This is where the exposure–repair–margins logic becomes important. Structural violence increases exposure, blocks repair, and depletes margins. It places some bodies and communities under chronic burden while providing others with insulation, mobility, and choice. It is not only an ethical problem. It is biological, psychological, social, ecological, and intergenerational.

The life-coherent health framework makes this point directly: many downstream clinical conditions reflect cumulative exposure, deprivation, humiliation, toxic environments, food systems, work conditions, stress, violence, and constrained repair; the body carries the history of organized conditions (Sahely, 2026).

A life-coherent peace framework therefore asks not merely whether people are dying from conflict, but whether social arrangements are preventing life from developing in the first place.

### 6.4 Cultural violence and the legitimization of harm

Structural violence persists partly because culture can make it seem normal. Galtung's concept of cultural violence names the symbolic, narrative, religious, ideological, scientific, educational, and linguistic systems that legitimize direct or structural violence (Galtung, 1990).

Culture can reveal suffering or hide it. It can dignify the vulnerable or blame them. It can protect life or glorify domination. It can treat care as sacred or devalue it as dependency. It can treat ecological restraint as wisdom or ridicule it as backwardness. It can call extraction development,

austerity responsibility, overwork ambition, debt discipline, hunger failure, homelessness choice, pollution sacrifice, and climate displacement unfortunate necessity.

A life-coherent culture makes life visible as life. It protects the dignity of bodies, elders, children, caregivers, disabled persons, workers, ecosystems, and future generations. It tells stories that support restraint, repair, participation, and reverence. Your prior framework describes cultural masking as one of the ways systems misrecognize or normalize preventable harm, allowing life-disabling conditions to appear acceptable, natural, necessary, or invisible (Sahely, 2026).

This is critical for Beyond GDP because indicators never speak in a vacuum. They enter a cultural field. An indicator may show poverty, but culture may blame the poor. An indicator may show ecological decline, but culture may call it the cost of progress. An indicator may show burnout, but culture may praise productivity. An indicator may show loneliness, but culture may privatize suffering. An indicator may show gendered violence, but culture may preserve silence.

Measurement therefore requires cultural interpretation. A dashboard does not speak for itself. It enters a field of stories. Life-coherent peace requires that those stories be reoriented toward recognition, responsibility, and repair.

## 6.5 Ecological, commercial, institutional, and digitally mediated harm

Galtung's framework can be extended carefully into contemporary forms of avoidable harm that were less visible in earlier peace research but are now central to human and planetary flourishing.

**Ecologically mediated harm** occurs when living systems are degraded in ways that undermine present and future life-capacity. Pollution, climate destabilization, biodiversity loss, water contamination, soil depletion, reef destruction, deforestation, toxic exposure, and ecosystem collapse are not merely environmental problems. They are harms imposed on bodies, communities, species, and generations. They disable life-capacity by damaging the life-ground.

**Commercially mediated harm** occurs when profit-seeking systems knowingly produce, amplify, or normalize exposure. This includes ultra-processed food environments, addictive commodities, predatory marketing, fossil-fuel disinformation, exploitative labor systems, debt traps, attention capture, and industries that privatize gains while socializing harms. The harm may be legal, normalized, and profitable, but it remains life-disabling.

**Institutionally mediated harm** occurs when institutions impose preventable burden, humiliation, exclusion, delay, fragmentation, or denial of care. A person may not be physically assaulted by an institution, yet may be worn down by forms, queues, denials, stigma, inaccessible systems, legal opacity, digital exclusion, and procedural indifference. Governance and law determine what is protected, permitted, funded, privatized, repaired, and contestable. They can protect life-capacity, but they can also disable it through exclusion, criminalization, dispossession, deregulation, punitive welfare, suppression of voice, or protection of harmful commercial practices.

**Digitally mediated harm** occurs when digital systems classify, rank, manipulate, surveil, exclude, addict, misinform, or automate decisions in ways that reduce agency, dignity, access, attention, or democratic participation. Such harms may appear neutral because they are technical. But technical systems carry values, data histories, institutional priorities, and power relations. A biased algorithm can deny access. A platform can capture attention. A recommendation system can amplify misinformation. A surveillance system can chill freedom. An automated welfare system can make exclusion appear objective.

A life-coherent peace framework brings these harms into view without collapsing all harms into the same category. The point is not to use the language of violence carelessly. The point is to recognize that peace cannot be adequately measured if predictable, preventable, and structurally organized harms remain invisible.

## 6.6 Toward life-coherent peace indicators

A life-coherent refinement of Beyond GDP should include a broader positive peace module. This module would retain conflict-related deaths, but place them within a wider architecture of avoidable life-harm.

Such a module could include indicators across several domains.

First, **direct violence and safety**: conflict deaths, homicides, intimate-partner violence, child abuse, elder abuse, sexual violence, hate crimes, non-lethal violence, and perceived safety.

Second, **structural life security**: food security, water security, housing security, energy access, healthcare access, living wage coverage, social protection, childcare, elder care, disability support, legal identity, safe transport, and disaster protection.

Third, **institutional peace**: access to justice, administrative burden, procedural fairness, complaint resolution, grievance redress, corruption, rights enforcement, public-service dignity, institutional trustworthiness, and participation in decision-making.

Fourth, **cultural dignity**: discrimination, cultural safety, language access, gender equality, disability inclusion, representation, freedom of expression, media pluralism, civic space, social inclusion, and intergroup trust.

Fifth, **ecological safety**: air pollution, water quality, toxic exposure, heat exposure, flood and storm-surge exposure, biodiversity intactness, reef health, mangrove and wetland protection, land degradation, climate vulnerability, and ecological restoration.

Sixth, **commercial and digital determinants of harm**: harmful commodity marketing, unhealthy food environments, predatory debt, labor exploitation, fossil-fuel subsidies, corporate political influence, algorithmic discrimination, digital exclusion, surveillance intensity, misinformation exposure, privacy violations, and attention-capture risks.

Seventh, **repair and reconciliation**: access to mental-health care, trauma-informed services, restorative justice, community mediation, victim support, ecological restoration, institutional redress, post-disaster recovery time, caregiver support, and community healing processes.

The point is not to overload every national dashboard. The point is to make clear that peace is a system property. It is distributed across the whole architecture of life.

## 6.7 Peace as a condition for flourishing

Peace should not be equated with social quietude or the absence of visible conflict. In a life-coherent framework, peace refers to the presence of conditions that prevent avoidable harm and enable repair, dignity, participation, and coexistence.

A society is peaceful when children can develop without fear, hunger, humiliation, or toxic exposure. It is peaceful when workers can contribute without exhaustion, exploitation, or disposability. It is peaceful when women and girls are safe in homes, streets, schools, workplaces, institutions, and digital spaces. It is peaceful when elders are not abandoned. It is peaceful when disabled persons are not excluded by design. It is peaceful when ecosystems are not sacrificed for short-term gain. It is peaceful when institutions listen, repair, and protect. It is peaceful when future generations are not forced to inherit the costs of present convenience.

Peace is therefore not one domain beside health, education, environment, work, or institutions. It is the quality of relations through which these domains become life-enabling rather than life-disabling.

The UN report opens the door by naming peace as foundational. Galtung helps us walk through that door by showing that peace requires the transformation of the structures and cultures that normalize harm. A life-coherent framework completes the movement by defining peace as the reduction of avoidable life-harm and the creation of conditions for legitimate coexistence.

Yet even this remains incomplete if measurement is treated as neutral. The next step is to ask how worlds are brought forth by the distinctions we make, the conversations we conserve, and the emotional ground from which we govern. This is the contribution of Maturana's relational biology.

# Part VII — Relational Biology and the Worlds

## Measurement Brings Forth

### 7. Measurement, language, emotion, and the observer

The movement beyond GDP begins as a measurement correction. It recognizes that societies have mistaken a narrow economic indicator for a civilizational compass. It then proposes broader indicators to make visible what GDP conceals: well-being, equity, sustainability, social cohesion, institutional quality, environmental integrity, and future resilience.

This is necessary. But it is not yet sufficient.

The deeper question is not only **what do we measure?** It is **what world do our measurements help conserve and reproduce?**

This is where Maturana's relational biology becomes indispensable. Maturana's work on autopoiesis, structural coupling, cognition, language, emotion, and the observer does not merely add another intellectual tradition to the Beyond GDP conversation. It changes the level of reflection. It asks us to look not only at the world being measured, but at the observer who measures; not only at indicators, but at the distinctions through which indicators arise; not only at policy, but at the recurring conversations and emotional orientations that sustain a given way of living.

From this perspective, measurement is not a neutral mirror held up to reality. Measurement is an act of distinction by observers within a domain of relations. It brings some things forth as visible, relevant, comparable, and actionable, while leaving other things unspoken, uncounted, or outside institutional concern. A society does not merely measure what it values. It also comes to value what it repeatedly measures.

GDP brought forth a world of production, consumption, income, prices, sectors, investment, labor, costs, returns, and growth. It did not simply describe that world; it helped organize attention, policy, aspiration, and institutional behavior around it. Beyond GDP widens the field, bringing forth well-being, equity, sustainability, social trust, institutional quality, and natural systems. This is an advance. But a life-coherent framework asks whether even this wider field still conserves deeper habits of control, comparison, management, and institutional self-legitimation.

The Maturanan question is therefore not only whether an indicator is accurate. It is also: **what form of living does this indicator participate in bringing forth?**

#### 7.1 The observer is never outside the world

Modern measurement systems often speak as if the observer stands outside the world, neutrally describing what is there. Maturana challenges this stance. The observer participates in the world

through distinctions, language, embodiment, history, and relation. To observe is not to access reality from nowhere. It is to bring forth a domain of reality through distinctions made by a living being within a relational field.

This does not mean that reality is arbitrary. It means that objectivity must become responsible. Observers must acknowledge the domain of distinctions in which claims are made. This is especially important for global measurement frameworks, because what appears universal may still arise from particular institutional histories, languages, priorities, and forms of power.

A national statistical office, an international agency, a ministry of finance, an Indigenous community, a caregiver, a child, a coral reef scientist, a farmer, a disabled person, a nurse, a migrant worker, and a future generation do not bring forth the same world. Their distinctions differ because their relations differ. A life-coherent progress framework must therefore avoid pretending that one observer's world exhausts reality.

This is why participation is not merely democratic decoration. It is epistemological necessity. Those who bear burdens often know dimensions of reality that official indicators cannot see. Those who live with ecological degradation know things that aggregate environmental accounts may miss. Those who navigate inaccessible institutions know forms of institutional harm that satisfaction surveys may not capture. Those who provide unpaid care know the hidden labor on which formal economies depend. Those who suffer digital exclusion know that technological efficiency may become practical abandonment.

The life-coherent question is therefore not simply whether indicators are technically valid. It is whether the process of distinction includes the lived worlds of those affected.

## 7.2 Indicators are not neutral mirrors

Indicators shape attention. Attention shapes action. Action shapes worlds.

A GDP indicator directs attention toward monetized activity. A poverty indicator directs attention toward deprivation. A trust indicator directs attention toward institutional legitimacy. A biodiversity indicator directs attention toward ecological integrity. A loneliness indicator directs attention toward relational life. Each indicator opens a field of concern, but also closes other fields by the limits of its definition.

This is why indicators must be treated with humility. They are not reality itself. They are tools for coordinating attention and action. They can reveal, but they can also conceal. They can liberate, but they can also dominate. They can invite repair, but they can also become instruments of control.

A life expectancy indicator may reveal population health decline, but it may conceal years lived in pain, disability, loneliness, or indignity. A public-service satisfaction indicator may reveal user experience, but it may conceal those excluded before they ever access the service. A work indicator may reveal employment, but conceal exhaustion, wage insufficiency, unsafe conditions, caregiving conflict, and loss of time. A natural capital indicator may reveal environmental asset

decline, but conceal the intrinsic value and relational meaning of living ecosystems. A subjective well-being indicator may reveal how people evaluate life, but conceal adaptation to deprivation or resignation under constrained possibility.

The question is not whether indicators are useful. They are necessary. The question is whether they remain answerable to life, or whether life becomes answerable to them.

A life-coherent framework treats indicators as servants of collective learning. They must be contestable, revisable, interpretable, and grounded in conversation with those affected. They must point toward life-enabling action rather than become ends in themselves.

### 7.3 The emotional ground of rational systems

Maturana's terms "linguaging" and "emotioning" point to the fact that human beings coordinate ways of living not only through information, but through recurring patterns of speech, feeling, attention, and relation. This matters profoundly for the Beyond GDP agenda.

Every rational system rests on an emotional ground. What counts as reasonable depends on the domain of concern in which reasoning occurs. Societies do not reason from nowhere. They reason from fear, competition, ambition, care, trust, love, resentment, humility, domination, solidarity, curiosity, or indifference.

A dashboard grounded in fear may become a tool of surveillance.

A dashboard grounded in competition may become a ranking system.

A dashboard grounded in control may become technocratic management.

A dashboard grounded in institutional self-protection may become performative reporting.

A dashboard grounded in extraction may become a way to optimize continued exploitation.

A dashboard grounded in care may become a tool for repair.

A dashboard grounded in humility may become a means of listening.

A dashboard grounded in love of life may become an instrument of transformation.

The same indicator can function differently depending on the emotional world in which it is used. Measuring poverty can become punitive if grounded in suspicion. It can become transformative if grounded in solidarity. Measuring public services can become managerial if grounded in control. It can become reparative if grounded in dignity. Measuring ecological damage can become a compliance exercise if grounded in avoidance. It can become civilizational conversion if grounded in reverence for life.

This is why the life-coherent health framework names dignity, equity, justice, solidarity, sustainability, precaution, transparency, accountability, love of life, and humility as necessary ethical orientations. These are not decorative values added after measurement. They shape what measurement becomes (Sahely, 2026).

A world cannot be transformed by indicators alone if the emotional ground that uses them remains unchanged.

## 7.4 Organism–niche relations

Maturana's concept of structural coupling helps move the analysis from measurement to living relation. Living systems do not exist as isolated objects placed inside an external environment. They conserve themselves through recurrent relations with the medium in which they live. Organism and niche are not two independent realities later connected by policy. They arise together through histories of coupling.

The life-coherent health framework makes this explicit. Persons live through recurrent relations with food, water, air, microbes, housing, work, care, culture, law, technology, institutions, ecosystems, and meaning. These relations may enable life-capacity or disable it. Health is therefore not located solely inside the body, nor outside the body in abstract determinants. It arises through organism–niche relations (Sahely, 2026).

This insight can be extended to progress as a whole.

A society is not an economy plus an environment. It is a living field of relations among bodies, communities, infrastructures, institutions, cultures, technologies, and ecosystems. Economic activity is one pattern within that field. Measurement should not abstract economic activity from the life relations that make it possible and bear its consequences.

The organism eats the food system.  
The child breathes the atmosphere.  
The worker metabolizes the schedule.  
The patient carries the institution.  
The community absorbs the policy.  
The citizen lives the law.  
The mind entrains to the digital environment.  
The body carries the history of exposure.  
The future inherits the present's decisions.

This is the relational ground that GDP cannot see and that Beyond GDP only begins to see. A life-coherent framework asks whether these recurrent couplings expand or reduce life-capacity.

## 7.5 Legitimate coexistence

Maturana's understanding of love as the domain in which the other is accepted as a legitimate other in coexistence provides a deep ethical foundation for this paper. Legitimate coexistence does not mean agreement, sentimentality, or absence of conflict. It means that the other is not treated as disposable, external, inferior, merely instrumental, or outside the domain of concern.

Applied to progress, legitimate coexistence means that persons, communities, workers, caregivers, children, elders, disabled persons, migrants, Indigenous peoples, ecosystems, other species, and future generations must not be reduced to externalities, resources, obstacles, data

points, consumers, beneficiaries, or costs. They must enter the conversation as participants in the web of life, including those who cannot speak for themselves in ordinary policy forums.

This does not mean that every being participates in the same way. Future generations cannot sit at the table. Ecosystems cannot speak in human language. Other species cannot submit policy briefs. But they can be represented through science, ethics, law, precaution, Indigenous and local knowledge, ecological observation, guardianship, cultural memory, and humility. Legitimate coexistence requires institutional imagination.

This is especially important for Beyond GDP because the report's ambition to make visible what GDP conceals is one of its strongest impulses. A life-coherent framework extends this impulse by insisting that visibility must lead to changed relations. The invisible must not merely become data. The voiceless must not merely become indicators. They must become morally and institutionally consequential.

Legitimate coexistence therefore asks:

- Who is missing from the conversation?
- Who cannot safely speak?
- Who is spoken about but not heard?
- Who is represented only as cost, risk, or vulnerability?
- Which ecosystems are treated as background?
- Which future harms are discounted?
- Which forms of knowledge are excluded because they are not statistical?
- Which communities are over-consulted and under-heard?

A life-coherent conversation begins when these absences become intolerable.

## 7.6 From command-and-control to enabling conditions

Maturana also warns against command-and-control thinking. Living systems are not machines that can simply be instructed from outside. They respond according to their structure, history, and relational field. This does not mean that intervention is impossible. It means that intervention must be understood as a change in conditions within a living system, not as unilateral control over life.

Applied to Beyond GDP, this means that dashboards should not become instruments for commanding societies into compliance with externally defined metrics. The goal is not to impose well-being from above. The goal is to create conditions in which communities, institutions, ecosystems, and persons can reorganize toward life-coherence.

This distinction matters. A command-and-control approach says: here are the indicators; improve them. A life-coherent approach says: let us examine together what our way of living is conserving; let us identify where life is being disabled; let us create conditions for repair, participation, and transformation.

The first approach manages populations.  
The second transforms relations.

The first approach may generate compliance.  
The second may generate learning.

The first approach protects the authority of the observer.  
The second invites the observer into responsibility.

This is why the life-coherent action cycle begins with recognition and renaming, not control. It proceeds through measurement, exposure, de-implementation, restoration of commons, redesign of affordances, protection of margins, coordination, monitoring, and learning. This is not a command sequence imposed on life. It is a method for changing the conditions in which life can respond.

## 7.7 The relational upgrade to Beyond GDP

The relational upgrade transforms the logic of progress measurement.

The conventional logic is:

**Measure → compare → rank → manage → report.**

The life-coherent relational logic is:

**Measure → reflect → converse → re-coordinate → repair → conserve life.**

This shift is subtle but decisive. Measurement remains, but it is nested in reflection. Reflection opens conversation. Conversation enables new coordinations. New coordinations make repair possible. Repair allows life-conserving patterns to be sustained.

In this sense, the goal is not merely better indicators. The goal is better worlds.

The UN Beyond GDP report asks societies to count what counts. A life-coherent framework asks: who is counting, from what distinctions, in what emotional orientation, and toward what form of coexistence? McMurtry asks whether what is counted enables life-value. Galtung asks whether avoidable harm is being reduced. Maturana asks what world is being brought forth through the distinctions and relations being conserved.

The resulting counsel is clear:

Do not measure from domination.  
Do not govern from fear.  
Do not consult from superiority.  
Do not call control care.  
Do not call adaptation to preventable harm resilience.

Do not call extraction development.  
Do not call market expansion progress.  
Do not call silence peace.

Instead, bring forth a world in which life is recognized, relations are repaired, commons are protected, margins are restored, and all those affected are treated as legitimate in coexistence.

The movement beyond GDP therefore becomes more than a technical reform. It becomes a transformation in what humanity is willing to conserve.

The next section gathers these foundations into the life-coherent framework for progress: a practical architecture that integrates life-value, life capital, positive peace, relational biology, exposure–repair–margins analysis, civil commons, capture detection, and coordinated life-enabling action.

## Part VIII — The Life-Coherent Framework for Progress

### 8. The core architecture

The movement from GDP to Beyond GDP widens the field of measurement. The movement from Beyond GDP to life-coherent progress deepens the field of responsibility. It asks not only whether societies are producing more, or even whether they are reporting broader indicators of well-being, equity, and sustainability. It asks whether the relations through which life is organized are enabling persons, communities, ecosystems, and future generations to live, heal, participate, repair, and flourish.

The life-coherent framework proposed here is not a replacement for the UN Beyond GDP dashboard. It is an interpretive and transformative architecture beneath and around it. The dashboard helps reveal what is happening. The life-coherent framework asks why it is happening, what life-capacities are being enabled or reduced, what forms of capital are life-coherent or life-incoherent, what forms of peace are present or absent, what burdens are being displaced, what commons are being protected or enclosed, and what relations must be transformed.

This framework rests on four integrated foundations.

First, the UN Beyond GDP agenda establishes the global measurement opening: progress must be understood as equitable, inclusive, and sustainable well-being, not as GDP growth alone (High-Level Expert Group on Beyond GDP, 2026).

Second, McMurtry's life-value onto-axiology provides the evaluative criterion: what enables life-capacity is value; what reduces, disables, or destroys life-capacity is disvalue (McMurtry, 2011a, 2011b, 2018).

Third, Galtung's peace theory deepens the moral and political field: peace requires the reduction of avoidable life-harm across direct, structural, cultural, ecological, institutional, commercial, and digitally mediated domains (Galtung, 1969, 1990).

Fourth, Maturana's relational biology provides the epistemic and relational guardrail: worlds are brought forth through distinctions, language, emotion, and recurrent structural coupling (Maturana, 1988; Maturana & Varela, 1980, 1987).

Together, these foundations allow the life-coherent framework to ask a more fundamental question:

#### **Does this way of living enable life to live?**

This question is diagnostic, evaluative, and practical. It applies to an economy, a public policy, a city, a school, a hospital, a digital platform, a food system, a climate plan, a development

strategy, a statistical dashboard, and a global governance framework. It asks whether the whole pattern expands or reduces life-capacity.

## 8.1 The life-master question

The framework can be expressed through one master question:

**What must be recognized, named, measured, exposed, de-implemented, restored, redesigned, protected, coordinated, and learned so that life-capacity flourishes for all, within the web of life, now and for future generations?**

This question performs several functions.

It begins with **recognition**, because harm that remains unseen cannot be repaired. GDP failed as a civilizational compass partly because it made many forms of life-loss invisible. Beyond GDP begins to correct this by measuring more dimensions. Life-coherence goes further by asking what is still unseen: unpaid care, ecological grief, administrative burden, attention capture, structural humiliation, cultural loss, repair failure, displaced harm, and the loss of future possibility.

It then requires **naming**, because misnaming is one of the ways harm is conserved. Extraction may be called development. Overwork may be called productivity. Abandonment may be called resilience. Manipulation may be called engagement. Privatized exclusion may be called efficiency. Ecological destruction may be called growth. Life-coherent progress requires language that does not hide life-disabling relations.

It requires **measurement**, but not measurement for its own sake. Measurement must serve life. It must reveal life-capacity, life goods, life capital, exposure burdens, repair pathways, margins, commons integrity, and burden displacement. It must also remain open to correction by lived experience, local knowledge, ecological observation, and moral reflection.

It requires **exposure**, because many systems function by hiding who benefits and who bears the burden. A life-coherent framework asks where harms are displaced: onto workers, caregivers, ecosystems, marginalized communities, indebted countries, small islands, future generations, or those unable to speak within conventional policy forums.

It requires **de-implementation**, because some practices should not merely be improved. They should be stopped. Harmful subsidies, extractive policies, predatory technologies, humiliating administrative procedures, toxic commodities, destructive infrastructures, and life-disabling institutional routines may need to be phased out.

It requires **restoration of commons**, because life depends on shared systems of provision: water, air, health, education, care, public knowledge, ecological protection, public space, social security, legal access, and democratic voice.

It requires **redesign of affordances**, because persons do not act in a vacuum. Choices are made within environments that make some actions easy, safe, meaningful, and supported, and others difficult, costly, risky, or impossible.

It requires **protection of margins**, because life cannot flourish at the edge of collapse. Time, sleep, care, trust, money, ecological buffers, institutional reserves, public-health capacity, and democratic space are not inefficiencies. They are conditions of resilience, repair, and freedom.

It requires **coordination**, because no single sector can secure life-coherence alone. Health, education, environment, economy, law, technology, housing, food systems, and culture are interconnected.

Finally, it requires **learning**, because living systems are dynamic. No framework can fully master life. Life-coherent governance must remain humble, adaptive, participatory, and corrigible.

## 8.2 Health, healing, and flourishing as prototype

The life-coherent framework developed in this paper grows naturally from the earlier health framework, which defined health as **life-capacity enabled**, healing as **life-capacity restored**, and flourishing as **life-capacity expressed in dignity, relation, meaning, participation, and ecological belonging** (Sahely, 2026).

That health framework provides a prototype because health is never only biological. It is biological, psychological, relational, social, ecological, institutional, and civilizational. A person's capacity to heal depends not only on cellular repair, but also on nutrition, sleep, safety, care, housing, income, trust, access to treatment, cultural meaning, ecological conditions, and time. The body metabolizes the niche.

The same is true of societies. A society cannot be evaluated only by its output. It must be evaluated by whether its structures enable repair, belonging, dignity, participation, and ecological continuity. A society can become diseased in its relations. It can normalize exposure, block repair, deplete margins, enclose commons, misname harm, and call adaptation to preventable burden "resilience." It can also heal by recognizing harm, restoring commons, redesigning affordances, protecting margins, and coordinating life-enabling action.

Health therefore becomes the prototype of progress. If health is life-capacity enabled, then progress is the expansion of life-capacity across the whole social-ecological field. If healing is life-capacity restored, then development must include the repair of damaged relations, ecosystems, institutions, and histories. If flourishing is life-capacity expressed in dignity, relation, meaning, participation, and ecological belonging, then the purpose of society is not merely prosperity, but life-flourishing.

### 8.3 From health systems to life systems

Modern societies often divide responsibility into sectors. Health belongs to ministries of health. Education belongs to schools. Nature belongs to environmental agencies. Work belongs to labor markets. Housing belongs to planning and real estate systems. Care belongs to families and social services. Technology belongs to innovation policy. Economy belongs to finance and commerce. Law belongs to justice systems.

These distinctions are administratively useful, but life does not experience them separately. The child experiences food, home, school, screen, neighborhood, air, safety, care, and culture as one lived field. The worker experiences wage, schedule, transport, sleep, dignity, family burden, digital demand, and bodily health together. The patient experiences disease, cost, fear, transport, waiting, trust, language, work absence, and family care as one reality. The ecosystem experiences extraction, pollution, climate, land use, law, commerce, and culture as one pressure field.

The life-coherent framework therefore moves from **health systems** to **life systems**.

A life system is any organized set of relations that enables or reduces life-capacity. Economies are life systems because they organize access to food, housing, work, care, time, and ecological resources. Institutions are life systems because they regulate access, rights, obligations, and repair. Technologies are life systems because they shape attention, agency, communication, knowledge, surveillance, and power. Cities are life systems because they shape movement, safety, air, belonging, nature, and time. Food systems are life systems because they shape metabolism, culture, land, labor, and ecosystems.

This does not mean that all systems are living organisms. It means that all systems that organize the conditions of life must be evaluated by their life consequences.

The central question becomes:

**What kind of organism–niche relations does this system produce?**

Does it generate safety or insecurity? Nourishment or toxicity? Agency or dependency? Care or abandonment? Meaning or alienation? Repair or chronic burden? Commons or enclosure? Ecological belonging or ecological rupture?

This is how life-coherence turns Beyond GDP from a dashboard into a theory of social organization.

### 8.4 Exposure, repair, and margins

The generative core of the life-coherent framework is the relation among **exposure, repair, and margins**.

Life is never free from exposure. Living beings encounter stress, injury, uncertainty, loss, conflict, infection, ecological change, and developmental challenge. Exposure is not inherently bad. Some exposures stimulate learning, adaptation, immunity, strength, creativity, and growth. The issue is whether exposures are proportionate, meaningful, supported, and within restorative capacity.

Repair is the capacity to recover, restore, heal, learn, adapt, reconcile, regenerate, and rebuild after exposure. Repair occurs biologically through sleep, immune resolution, tissue healing, metabolic regulation, and nervous-system recalibration. It occurs psychologically through meaning, emotional processing, therapy, play, rest, and agency. It occurs socially through care, apology, justice, community support, and belonging. It occurs ecologically through restoration, regeneration, succession, and protection. It occurs institutionally through redress, reform, accountability, and learning.

Margins are the reserves that allow exposure and repair to remain viable. They include time, energy, safety, trust, money, care, ecological buffers, institutional capacity, public-health reserve, democratic space, and social solidarity. Margins are often misread as inefficiency because they look like slack, redundancy, or unused capacity. But without margins, systems become brittle. A person without sleep margin collapses under stress. A family without financial margin is one emergency away from crisis. A hospital without surge capacity fails during epidemics. An ecosystem without biodiversity loses resilience. A democracy without trust cannot deliberate. A climate system without buffers destabilizes.

The life-coherent framework therefore proposes a simple generative logic:

**Exposure → Repair → Margins → Life-Capacity → Flourishing**

Progress is real when harmful exposures are reduced, necessary exposures are made meaningful and supported, repair systems are accessible, margins are protected, and life-capacity expands. Decline occurs when exposure rises, repair is blocked, margins are depleted, and life-capacity contracts.

This logic gives practical depth to Beyond GDP indicators. If health worsens, the question becomes: what exposures increased, what repair pathways failed, and what margins were depleted? If trust declines, what institutional exposures have people endured, what repair has been denied, and what social margins have been eroded? If biodiversity declines, what ecological exposures exceed regenerative capacity, and what buffers have been destroyed? If loneliness rises, what relational affordances have been weakened, and what forms of social repair are missing?

## 8.5 Exposure burden

Exposure burden refers to the cumulative pressures that living beings, communities, institutions, and ecosystems must absorb. These burdens can be physical, chemical, biological, nutritional, psychosocial, commercial, digital, institutional, cultural, political, or ecological.

Physical exposures include heat, noise, unsafe housing, injury risk, occupational hazards, crowding, and environmental extremes. Chemical exposures include air pollution, pesticides, heavy metals, endocrine disruptors, contaminated water, industrial toxins, and household chemicals. Biological exposures include infectious disease, poor sanitation, antimicrobial resistance, vector-borne disease, and microbiome disruption. Nutritional exposures include food insecurity, ultra-processed diets, micronutrient deficiencies, predatory food marketing, and loss of local food sovereignty.

Psychosocial exposures include fear, humiliation, violence, loneliness, discrimination, chronic insecurity, grief, overwork, and loss of meaning. Commercial exposures include harmful commodities, addictive design, debt traps, exploitative labor, corporate influence, and marketing that shapes desire against life. Digital exposures include attention capture, misinformation, surveillance, algorithmic bias, cyberbullying, platform dependency, and data extraction. Institutional exposures include administrative burden, denial of care, fragmented services, legal precarity, corruption, and procedural humiliation. Ecological exposures include climate instability, sea-level rise, biodiversity loss, water scarcity, reef degradation, soil depletion, and disaster risk.

The important point is that exposures accumulate. They interact across levels. A child exposed to food insecurity, poor housing, unsafe neighborhoods, digital stress, school pressure, polluted air, and family financial strain does not experience these as separate variables. The body receives them together. The community absorbs them together. The future carries them forward.

Beyond GDP indicators may reveal some exposure outcomes. A life-coherent framework asks for the exposure field itself.

## 8.6 Repair capacity

Repair capacity refers to the biological, relational, institutional, ecological, and cultural resources that allow systems to recover, heal, restore, regenerate, and learn.

At the level of persons, repair includes sleep, nourishment, movement, safety, healthcare, therapy, emotional support, meaning, play, spiritual or existential grounding, nature contact, and time. At the level of families and communities, repair includes care networks, social trust, mutual aid, cultural continuity, conflict resolution, public space, civic participation, and shared rituals. At the institutional level, repair includes accessible services, accountability, grievance redress, restorative justice, learning systems, public-health capacity, and policy correction. At the ecological level, repair includes conservation, restoration, biodiversity protection, watershed management, soil regeneration, climate mitigation, and respect for ecological thresholds.

Repair is not merely recovery after harm. It is a standing condition of life. Systems that cannot repair become brittle, defensive, and prone to collapse. Persons who cannot repair become chronically stressed, inflamed, exhausted, or alienated. Communities that cannot repair become polarized, mistrustful, violent, or resigned. Institutions that cannot repair lose legitimacy. Ecosystems that cannot repair cross thresholds.

A life-coherent progress framework must therefore ask not only what harms occur, but what repair pathways exist. Are they accessible? Are they trusted? Are they culturally meaningful? Are they adequately funded? Are they timely? Are they dignified? Are they distributed equitably? Are they preventive as well as reactive?

This is one of the major gaps in conventional development measurement. Societies often measure damage better than repair. They count disease but not healing capacity. They count crime but not restored relations. They count disasters but not ecological buffers. They count educational attainment but not curiosity restored. They count institutional satisfaction but not institutional repair after harm.

To deepen Beyond GDP, repair must become central.

## 8.7 Margins and buffers

Margins are the protected spaces of reserve that allow life to absorb disturbance without collapse. They are the difference between stress and breakdown, challenge and trauma, variation and crisis, adaptation and exhaustion.

For persons, margins include sleep, rest, health reserves, emotional capacity, income security, savings, supportive relationships, safe housing, and time. For families, margins include caregiving support, flexible work, community networks, financial stability, and access to services. For communities, margins include social trust, public space, local knowledge, disaster preparedness, cultural continuity, and democratic participation. For institutions, margins include staffing, redundancy, public legitimacy, coordination capacity, transparency, and learning. For ecosystems, margins include biodiversity, intact habitats, soil depth, water retention, mangroves, reefs, forests, wetlands, and climate stability.

Modern systems often erode margins in the name of efficiency. Lean supply chains reduce redundancy. Just-in-time labor reduces worker security. Hospital beds are cut to maximize occupancy. Public institutions are underfunded until they cannot respond. Families are expected to absorb more care with less time. Ecosystems are simplified for productivity. Democracies are polarized until trust disappears. The result is fragility.

A life-coherent framework treats margins as life capital. They are not waste. They are the hidden infrastructure of resilience, repair, and freedom. Without margins, every disturbance becomes a threat. With margins, life can experiment, learn, rest, recover, and grow.

This is also where equity becomes concrete. Some groups live with wide margins: savings, safe homes, flexible work, private care, legal access, mobility, and political voice. Others live at the edge: one illness, storm, job loss, bill, denial, or delay away from crisis. A Beyond GDP dashboard may show inequality. A life-coherent framework asks how margins are distributed and how they can be protected as a matter of justice.

## 8.8 Flourishing outcomes

Flourishing is the expression of life-capacity when exposure is not overwhelming, repair is available, margins are protected, and life goods are secured. It is not perfection, comfort, or the absence of suffering. Human life includes vulnerability, illness, grief, conflict, uncertainty, and death. A life-coherent framework does not promise a world without difficulty. It seeks a world in which avoidable harm is not normalized, repair is not blocked, and life has room to unfold.

Flourishing includes health, but it is more than health. It includes dignity, bodily integrity, belonging, knowledge, agency, meaning, participation, care, creativity, ecological harmony, spiritual or existential expression, security, and future possibility. These are not luxuries added after development. They are signs that life-capacity is being expressed.

At the collective level, flourishing means communities can deliberate, care, remember, adapt, repair, and participate. Institutions are trusted because they are trustworthy. Economies provision life goods without destroying life-ground. Technologies expand agency rather than capture attention. Education cultivates understanding and imagination. Work contributes meaningfully without consuming the worker. Ecological systems regenerate. Future generations remain morally present.

This is the goal of life-coherent progress.

The UN framework's phrase "equitable, inclusive, and sustainable well-being" is a necessary global formulation. Life-coherence deepens it into a more generative understanding: equitable, inclusive, and sustainable well-being becomes real when life-capacity is enabled, restored, and expressed through life capital, positive peace, ecological integrity, civil commons, repair, margins, and legitimate coexistence.

The next task is practical. How can the UN Beyond GDP dashboard be refined so that it becomes not merely a system of measurement, but a life-system diagnostic? That is the purpose of the next section.

## Part IX — From Dashboard to Life-System Diagnostic

### 9. Refining the UN Beyond GDP Dashboard

The UN Beyond GDP dashboard is a necessary scaffold. It identifies dimensions of progress that GDP cannot see: peace, human rights, respect for the planet, health, education, work, security, subjective well-being, social cohesion, institutional quality, environmental quality, equity, inclusion, and sustainability through multiple forms of capital. Its architecture is practical, institutionally intelligible, and aligned with existing data systems. Its strength is that it gives governments and statistical institutions a usable bridge away from GDP dominance (High-Level Expert Group on Beyond GDP, 2026).

The task of a life-coherent framework is not to discard that bridge, but to clarify where it must lead. A dashboard tells us what is happening. A life-system diagnostic asks what relations are producing what is happening, whose life-capacities are being enabled or reduced, where harm is being displaced, what commons are being enclosed, what forms of capital are life-coherent or life-incoherent, and what must be transformed.

The UN report itself recognizes that the value of any measurement framework depends on how it is used. Indicators matter only if they inform policy, budgets, institutions, public accountability, and social learning. This is the opening for a life-coherent refinement: Beyond GDP indicators should not merely report multidimensional outcomes; they should help societies diagnose and transform the conditions through which life is enabled or disabled.

#### 9.1 The dashboard as starting point

The UN dashboard begins from a pragmatic choice: use a limited number of indicators, many drawn from existing SDG measurement systems, so that countries can begin implementation without waiting for an entirely new statistical architecture. This is wise. A framework that is conceptually elegant but impossible for countries to populate will remain aspirational. Statistical offices need methodological continuity. Policymakers need indicators that can enter planning and budgeting. Civil society needs evidence that can support accountability.

But the dashboard must be treated as a beginning rather than a completion. If the selected indicators are constrained too strongly by current data availability, political feasibility, and methodological consensus, the framework may reproduce existing blind spots. Many of the most important life-reducing dynamics are precisely those that are not yet well measured: care depletion, administrative burden, commercial capture, algorithmic harm, false efficiency, ecological grief, commons enclosure, time poverty, loss of future possibility, and adaptation to normalized harm.

A life-coherent approach therefore accepts the dashboard as the first layer, while adding interpretive and transformative layers around it. The question is not only whether a country reports the indicators. The question is whether the indicators help reveal and transform the conditions that enable or reduce life-capacity.

## 9.2 The life-value foundation layer

The first refinement is a **life-value foundation layer**.

Every indicator should be interpreted through the question:

**Does this indicator reveal whether life-capacities are being enabled or reduced?**

This question prevents measurement from becoming detached from its purpose. A health indicator matters because health enables life-capacity. An education indicator matters because education expands thought, imagination, agency, and participation. A work indicator matters because work can provide livelihood, dignity, service, meaning, and contribution, but can also produce exhaustion, domination, and disposability. An environmental indicator matters because air, water, soil, climate, biodiversity, and ecosystems are life-ground conditions. An institutional indicator matters because institutions can protect rights, reduce burden, repair harm, and secure commons, but can also humiliate, exclude, and normalize injustice.

The life-value layer also helps distinguish between indicators that look good and conditions that are genuinely life-enabling. Employment may rise, but if work is precarious, unsafe, underpaid, exhausting, or incompatible with care, life-capacity may still decline. Educational attainment may rise, but if learning becomes debt, anxiety, credential competition, and ecological illiteracy, the result is ambiguous. Infrastructure may expand, but if it increases ecological overshoot or housing exclusion, it may be life-incoherent capital.

The life-value layer asks every indicator to justify itself before life.

## 9.3 The planetary boundary layer

The second refinement is a **planetary boundary layer**.

The UN report recognizes the importance of planetary limits and the danger of a sustainability mirage, in which gains in economic, produced, or human capital conceal ecological degradation (High-Level Expert Group on Beyond GDP, 2026). A life-coherent framework strengthens this by treating planetary boundaries as non-negotiable life-ground thresholds.

This means ecological indicators should not merely be included as one domain among others. They should function as boundary conditions for the entire framework. A society should not be able to claim progress if its well-being depends on breaching climate stability, destroying biodiversity, degrading water systems, collapsing reefs, poisoning soil, or exporting ecological harm elsewhere.

In conventional capital accounting, there is always a danger that natural systems become one asset class among others. A life-coherent framework reverses this. Nature is not merely natural capital. It is the life-ground within which all other capital exists. Produced capital, human capital, social capital, institutional capital, and financial capital have no enduring meaning outside

breathable air, drinkable water, fertile soil, biodiversity, ocean integrity, climate stability, and ecological regeneration.

The planetary boundary layer therefore asks:

**Are all reported gains occurring within the biophysical conditions required for life to continue?**

If the answer is no, the progress claim fails.

## 9.4 The life capital layer

The third refinement is a **life capital layer**.

The UN report identifies produced, human, social, institutional, and natural capital as key forms of capital linking present well-being to future well-being. This is important because it prevents societies from confusing current consumption with durable progress. But each form of capital must be interpreted through the life-capital test.

Produced capital is life-coherent only when infrastructure, housing, transport, energy, tools, and technology expand access to life goods with minimal harm. Human capital is life-coherent only when knowledge, health, skill, creativity, and capability expand the range of thought, feeling, action, dignity, agency, and flourishing. Social capital is life-coherent only when trust, reciprocity, belonging, and networks expand inclusive cooperation and care. Institutional capital is life-coherent only when laws, rules, public services, and governance protect rights, justice, repair, access, and civil commons. Natural capital becomes life capital only when it is protected as life-ground, not treated as a substitutable asset.

This layer prevents the dashboard from treating all accumulation as positive. Some capital stocks grow by reducing life-capacity. Housing assets may appreciate while shelter access declines. Digital systems may expand while attention, privacy, and agency are captured. Economic infrastructure may grow while ecological resilience declines. Institutional systems may become more efficient while citizens become more burdened.

The life capital layer asks:

**Does this capital secure life goods, expand life-capacity, protect commons, regenerate through time, respect planetary boundaries, and avoid burden displacement?**

If not, it should not be counted as life-coherent progress.

## 9.5 The civil commons layer

The fourth refinement is a **civil commons layer**.

Civil commons are shared life-support systems that enable access to life goods without requiring private purchasing power as the primary condition of access. They include clean water, breathable air, public health, education, care, ecological protection, public knowledge, public space, social security, cultural inheritance, legal protection, and accountable governance. In the life-coherent health framework, civil commons are treated not as optional welfare additions, but as health-generating and life-supporting conditions (Sahely, 2026).

This is one of the most important additions to Beyond GDP. The UN dashboard includes institutional quality, environmental quality, health, education, and social cohesion, but it does not yet explicitly name civil commons as the infrastructure of life-capacity.

Without civil commons, well-being becomes privatized. People must purchase clean water, private security, private education, private healthcare, private recreation, private transport, private data protection, private therapy, private elder care, and private escape from ecological harm. Those with wealth secure partial insulation. Those without wealth absorb exposure.

A life-coherent dashboard should therefore ask not only whether people are well, but whether shared life-support systems are strong, accessible, protected, dignified, and democratically governed.

Civil commons indicators could include access to safe public water, universal primary care, public-health capacity, quality public education, libraries and public knowledge systems, parks and green space, public-interest digital infrastructure, legal aid, social protection floors, care systems, sanitation, clean air protections, and ecological restoration programs.

The civil commons layer asks:

**Are the conditions of life secured as shared rights and responsibilities, or are they privatized, enclosed, degraded, and made dependent on market power?**

## 9.6 The margins and repair layer

The fifth refinement is a **margins and repair layer**.

Current well-being indicators tell us something about states of life. But they do not always tell us whether people, communities, institutions, and ecosystems have enough repair capacity and margin to remain viable.

A country may report acceptable current well-being while its margins are collapsing. Families may be one illness away from crisis. Hospitals may be one epidemic away from overload. Schools may be functioning only through teacher exhaustion. Ecosystems may appear stable until thresholds are crossed. Public trust may appear adequate until a shock reveals institutional brittleness. Workers may be employed but without time, sleep, savings, or care capacity.

Margins are not luxuries. They are the hidden conditions of resilience, repair, and freedom.

A life-coherent dashboard should therefore include indicators of time poverty, sleep sufficiency, caregiver burden, household financial buffer, public-health surge capacity, institutional staffing reserves, ecological buffers such as wetlands and mangroves, social support, democratic space, and access to repair systems such as mental healthcare, restorative justice, grievance redress, and ecological restoration.

The margins and repair layer asks:

**Are people, communities, institutions, and ecosystems being given enough time, care, trust, reserve, and regenerative capacity to recover and flourish?**

## 9.7 The positive peace layer

The sixth refinement is a **positive peace layer**.

The UN report includes peace as a foundational principle, but a life-coherent framework asks that peace be understood beyond the absence of direct violence. This does not diminish the importance of conflict-related deaths. Rather, it places them within a wider field of avoidable life-harm.

A positive peace layer would measure direct, structural, cultural, ecological, institutional, commercial, and digitally mediated conditions that reduce life-capacity. This would include not only violence deaths, but also food insecurity, housing insecurity, unsafe work, discrimination, gendered violence, institutional burden, ecological exposure, harmful commercial environments, digital manipulation, and lack of access to repair.

This layer is essential because societies can appear peaceful while normalizing slow harm. Communities may not be at war, but still be burdened by preventable disease, toxic exposure, despair, exclusion, unemployment, debt, unsafe housing, and loss of ecological future.

The positive peace layer asks:

**Are avoidable conditions that reduce life-capacity being transformed, or merely managed?**

## 9.8 The capture and burden-displacement audit

The seventh refinement is a **capture and burden-displacement audit**.

This is where a life-coherent framework most directly protects Beyond GDP from performativity. Measurement systems can be captured. Metrics can narrow attention. Institutions can optimize what is measured while ignoring what matters. Commercial actors can influence indicator selection. Algorithms can classify exclusion as efficiency. Cultural narratives can misname harm as tradition or necessity. Governments can use dashboards to display concern without transforming underlying relations.

Every Beyond GDP dashboard should therefore be accompanied by an audit asking:

What is seen?  
What is misnamed?  
What is ignored or invisible?  
Who selected the indicators?  
Whose knowledge counts?  
Who benefits from this measurement?  
Who bears the burden of data collection, policy implementation, and system adaptation?  
What harms are normalized?  
What commons are being enclosed?  
What burdens are displaced elsewhere or into the future?  
What policies, practices, subsidies, or technologies should be de-implemented?

The audit also asks whether one society's apparent well-being is achieved by exporting harm onto others. A country is not life-coherent if it secures prosperity by importing cheap goods produced through labor exploitation. It is not life-coherent if it protects its own environment while exporting waste. It is not life-coherent if it benefits from historical and ongoing emissions while small islands bear climate risk. It is not life-coherent if it uses financial rules, debt arrangements, tax structures, or trade regimes that weaken the life-capacity of poorer countries.

Spillover accounting must therefore become burden-displacement accounting.

The key questions are:

Who consumes?  
Who extracts?  
Who profits?  
Who absorbs waste?  
Who carries debt?  
Who loses land, water, reef, forest, or climate stability?  
Who migrates because life-ground has been damaged?  
Who is praised as resilient while absorbing harm produced elsewhere?

The capture and burden-displacement audit asks:

**Is this measurement system revealing life-reducing power, or helping it adapt?**

## 9.9 The life-coherence test for every indicator

The final refinement is a **life-coherence test** applied to every indicator.

For each indicator, the framework should ask:

Does it reveal life-capacity or conceal it?  
Does it measure life goods or system outputs?

Does it identify sufficiency, not merely averages?  
Can it be disaggregated by burden, exposure, repair, and margin?  
Can affected communities contest its meaning?  
Does it reveal who benefits and who pays?  
Does it detect burden displacement?  
Does it distinguish life capital from life-incoherent capital?  
Does it point toward de-implementation where harm is identified?  
Does it help coordinate life-enabling action?

This test transforms the dashboard from a passive report into a living instrument of governance. Indicators become not endpoints, but invitations to responsibility. They do not merely say, “this is the state of the world.” They ask, “what relations must be changed so that life can flourish?”

In this way, the UN Beyond GDP framework can be honored and deepened. Its dashboard becomes the visible surface of a more profound architecture: life-value, life capital, positive peace, organism–niche relations, civil commons, exposure–repair–margins analysis, capture detection, and life-enabling action.

The next section turns to that action method. Measurement must lead somewhere. If it does not lead to transformation, it risks becoming a ritual of concern. A life-coherent framework therefore moves from dashboard to action cycle: recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, and learn.

# Part X — The Life-Coherent Action Method: From Measurement to Transformation

## 10. From measurement to life-enabling action

Measurement is indispensable, but it is not transformation. A society can measure poverty while preserving the arrangements that produce poverty. It can measure ecological decline while continuing ecological destruction. It can measure loneliness while designing isolating cities, workplaces, schools, and digital environments. It can measure institutional mistrust while maintaining institutions that burden, exclude, or humiliate. It can measure health inequity while leaving the exposure fields that generate illness intact.

This is the central danger of any Beyond GDP agenda: it may widen recognition without changing the relations that recognition reveals.

The life-coherent framework therefore requires an action method. Measurement must become part of a living cycle of recognition, renaming, exposure, repair, redesign, and learning. Indicators must not remain external descriptions of society. They must help societies re-coordinate their relations so that life-capacity can expand.

The life-coherent health framework already formulates such a practical cycle: recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, monitor, and learn (Sahely, 2026). The same cycle can now be extended from health to the wider field of progress.

The task is not merely to ask, “How is the country performing?” The deeper task is to ask:

**What must change in the organism–niche relations of society so that persons, communities, ecosystems, and future generations can live, heal, participate, repair, and flourish?**

### 10.1 Why measurement is not enough

The UN Beyond GDP report recognizes that the value of any measurement framework depends on whether and how it is used. Indicators matter only if they shape policy design, decision-making, budgeting, accountability, public understanding, and institutional behavior (High-Level Expert Group on Beyond GDP, 2026).

This point is decisive. Indicators do not transform society automatically. They enter existing fields of power, interpretation, incentives, institutions, and emotion. They may be used for accountability, or they may be used for performance display. They may open debate, or they may close it. They may reveal harm, or they may normalize the management of harm.

A dashboard can show that air pollution is high. But someone must decide whether to regulate industry, redesign transport, restore green space, protect vulnerable communities, or merely

advise individuals to avoid exposure. A dashboard can show that loneliness is rising. But someone must decide whether to transform work, housing, digital systems, public space, care systems, and community life. A dashboard can show that biodiversity is falling. But someone must decide whether to stop destructive activity, restore ecosystems, protect land and sea, and confront vested interests.

Measurement makes conditions visible. Transformation changes the relations that produce them.

This is why the life-coherent action method begins before measurement and continues after it. It begins with recognition and renaming because what is not seen and accurately named cannot be repaired. It proceeds through measurement and exposure because harms must be made visible in ways that reveal causes, beneficiaries, burdens, and responsibilities. It then moves to de-implementation, commons restoration, affordance redesign, margin protection, coordination, and learning because progress requires changed conditions, not merely changed reports.

## 10.2 Recognize

Recognition is the first act of life-coherent transformation. It means allowing suffering, degradation, depletion, exclusion, and loss to become visible as matters of public responsibility rather than private failure, isolated misfortune, or unavoidable fate.

GDP failed as a civilizational compass partly because it misrecognized the world. It recognized transactions but not necessarily nourishment. It recognized production but not necessarily care. It recognized reconstruction after disaster but not the avoided disaster. It recognized market growth but not commons depletion. It recognized paid labor but not unpaid care. It recognized economic throughput but not life-capacity.

Beyond GDP begins the work of recognition by widening what is seen. Life-coherent recognition asks what is still unseen: care depletion, time poverty, ecological grief, institutional humiliation, administrative burden, digital exclusion, attention capture, unsafe work, food-system harm, housing insecurity, commercial manipulation, blocked repair, margin depletion, burden displacement, commons enclosure, and loss of future possibility.

Recognition also requires listening. Those who bear burdens often know what institutions cannot see. A community living beside polluted water, a caregiver navigating fragmented services, a patient carrying chronic disease, a teacher facing exhausted children, a farmer watching soil and rainfall change, a young person facing ecological anxiety, or a worker trapped in precarious scheduling each recognizes dimensions of reality that aggregate indicators may flatten.

To recognize life is to let these realities enter the field of what counts.

## 10.3 Rename

After recognition comes renaming. Harm often persists because it is misnamed.

Extraction is called development. Overwork is called productivity. Administrative burden is called accountability. Commercial manipulation is called consumer choice. Privatized exclusion is called efficiency. Adaptation to preventable harm is called resilience. Ecological destruction is called growth. Structural abandonment is called personal responsibility. Attention capture is called engagement. Public austerity is called discipline. Commons enclosure is called innovation.

Renaming is not rhetorical ornament. It is epistemic repair. The language of a society determines what can be seen, blamed, funded, regulated, mourned, repaired, or ignored. If homelessness is named as personal failure, policy will differ from when it is named as shelter-system failure. If chronic disease is named only as lifestyle failure, policy will differ from when it is named as an expression of food systems, stress, work, pollution, inequality, and blocked repair. If climate vulnerability is named as natural disaster, policy will differ from when it is named as historically produced burden displacement.

Life-coherent renaming asks whether language reveals the organism–niche relation or hides it. It seeks words that make life-reducing arrangements visible.

This is especially important for Beyond GDP. New indicators will not be enough if old language remains. A society may measure well-being while still speaking the language of competitiveness, investor confidence, consumer demand, labor flexibility, and fiscal discipline as if these were unquestionable ends. Life-coherent language reorders the relation: economy, technology, law, finance, education, health, and governance must justify themselves before life.

## 10.4 Measure

Measurement is the third movement, not the first. This sequence matters. If measurement begins before recognition and renaming, it may measure the wrong things in the wrong language. It may count symptoms while hiding causes. It may measure what is administratively convenient rather than what is life-important.

Life-coherent measurement asks what must be known to protect and expand life-capacity. It measures not only outcomes, but also exposure, repair, margins, commons, capture, and burden displacement.

It asks:

- Are people able to secure life necessities?
- Are exposures increasing or decreasing?
- Are repair pathways available and dignified?
- Are margins protected or depleted?
- Are commons being restored or enclosed?
- Are institutions trustworthy or merely trusted?
- Are ecological thresholds respected?
- Are harms displaced across borders or generations?
- Are life-capacities expanding or contracting?

This does not eliminate the need for standard indicators. It deepens their interpretation. Household income matters, but sufficiency and security matter too. Employment matters, but dignity, time, safety, wage adequacy, and care compatibility matter too. Life expectancy matters, but healthy life, repair, and quality of participation matter too. Education matters, but meaning, agency, imagination, and ecological literacy matter too. Environmental quality matters, but life-ground thresholds and ecological regeneration matter too.

Measurement must be accurate, comparable, and methodologically responsible. But it must also be humble. It must know that no indicator exhausts life. It must remain open to correction by lived experience, local knowledge, ecological observation, and moral reflection.

## 10.5 Expose

To expose is to reveal hidden relations of benefit, burden, harm, and power.

Many life-reducing systems survive because their costs are displaced. The price of a commodity may not include polluted rivers, exhausted workers, unpaid care, chronic disease, climate risk, biodiversity loss, public-health costs, cultural erosion, or future repair. The efficiency of an institution may not include the time, confusion, stress, and humiliation imposed on users. The profitability of a platform may not include attention fragmentation, misinformation, privacy loss, and democratic degradation. The apparent resilience of a small island may not include the historical emissions, debt structures, and global inequalities that made such resilience necessary.

Exposure makes these hidden transfers visible.

It asks:

- Who benefits?
- Who bears the burden?
- Who is absent from the accounting?
- Who is made responsible for harms they did not create?
- Which communities absorb exposure?
- Which ecosystems absorb waste?
- Which families absorb care?
- Which generations inherit risk?
- Which institutions avoid accountability?
- Which forms of capital are life-incoherent?

Exposure is not blame for its own sake. It is the precondition for justice. Without exposure, societies may treat harm as natural, accidental, or individually caused. With exposure, the relations that generate harm can be transformed.

A life-coherent Beyond GDP framework must therefore make burden displacement central. Progress is false if one group's well-being is purchased by another's life-loss.

## 10.6 De-implement

Not everything harmful needs improvement. Some things need to stop.

This is the meaning of de-implementation. A life-coherent framework must identify policies, practices, subsidies, technologies, commodities, institutional routines, and cultural patterns that reduce life-capacity and should be phased out, restricted, redesigned, or abolished.

De-implementation is often harder than innovation because harmful systems have beneficiaries. They are defended by habits, investments, jobs, narratives, laws, professional identities, institutional inertia, and political power. Yet without de-implementation, societies may simply add life-supporting programs on top of life-reducing systems. This produces exhaustion and contradiction. Public-health campaigns struggle against harmful food environments. Mental-health services struggle against work systems that produce distress. Climate adaptation struggles against continued fossil expansion. Social programs struggle against housing markets that produce insecurity.

Life-coherent governance must therefore ask:

What must we stop doing?

What must no longer be subsidized?

What must no longer be called development?

What must no longer be allowed to externalize harm?

What institutional routines are life-reducing?

What technologies should not be deployed merely because they are profitable or possible?

What indicators reveal harm but fail to trigger cessation?

De-implementation is the test of seriousness. A society that measures harm but refuses to stop producing it remains performative.

## 10.7 Restore commons

Life-capacity depends on shared life-support systems. These civil commons include clean water, breathable air, public health, education, care, public knowledge, ecological protection, public space, social security, legal access, cultural memory, and accountable governance. The life-coherent health framework emphasizes that civil commons are not optional welfare additions; they are health-generating and life-supporting conditions (Sahely, 2026).

Restoring commons means rebuilding the shared conditions that allow life goods to be accessed without humiliation, exclusion, or dependence on private purchasing power alone.

It means treating water as life necessity before commodity. Healthcare as care before revenue. Education as life-capacity development before credential competition. Housing as shelter before asset class. Food as nourishment before market throughput. Technology as public agency before

data extraction. Nature as life-ground before resource stock. Law as protection of life before protection of accumulation.

Commons restoration is not nostalgia. It is not a return to an imagined past. It is the creation and renewal of shared infrastructures appropriate to the conditions of the present: ecological commons, digital commons, knowledge commons, care commons, health commons, climate resilience commons, and democratic commons.

The purpose is not to eliminate private initiative. The purpose is to ensure that private initiative remains nested within protected life conditions. Markets may serve life, but life must not be made dependent on market power for its most basic means.

## 10.8 Redesign affordances

People do not live by information alone. They live within affordance fields: environments that make some actions easy, safe, meaningful, supported, and repeatable, and others difficult, costly, risky, or impossible.

A life-coherent framework therefore moves beyond advising individuals to make better choices. It asks whether the surrounding niche makes life-enabling choices available.

Can people sleep? Can they access nourishing food? Can they move safely? Can they breathe clean air? Can they care for children and elders without collapse? Can they reach healthcare without financial or administrative burden? Can they participate in decisions? Can they disconnect from harmful digital systems? Can they find meaningful work? Can they live near green space? Can they repair relationships and institutions after harm? Can they imagine a future?

Affordance redesign is the practical counterpart of organism–niche thinking. If the niche repeatedly exposes people to stress, toxicity, manipulation, insecurity, and isolation, then exhortation will fail. If the niche supports nourishment, movement, rest, care, safety, belonging, learning, ecological contact, and participation, life-capacity can expand.

This principle applies across sectors. A transport system can be redesigned for safe walking, cycling, public access, reduced emissions, and less time burden. A food system can be redesigned for nourishment, local resilience, ecological farming, and reduced ultra-processed exposure. A school can be redesigned for curiosity, play, belonging, ecological literacy, and democratic participation. A health system can be redesigned for continuity, prevention, trust, and repair. A digital system can be redesigned for agency, transparency, privacy, and attention protection.

The question is always: does the design make life easier to live well?

## 10.9 Protect margins

Margins are often sacrificed in the name of efficiency, but life depends on them.

A person needs margins of sleep, time, emotional capacity, income, safety, and trust. A family needs margins of care, flexibility, savings, and support. A community needs margins of public space, social cohesion, local capacity, and mutual aid. A health system needs margins of staffing, beds, supplies, public trust, and surge capacity. An ecosystem needs margins of biodiversity, habitat continuity, water retention, and climate stability. A democracy needs margins of deliberation, tolerance, truth, and institutional legitimacy.

When margins disappear, systems become brittle. Small shocks become crises. Ordinary stress becomes trauma. Delay becomes catastrophe. Adaptation becomes exhaustion.

Protecting margins means refusing to organize society at the edge of collapse. It means recognizing that slack, redundancy, rest, reserve, and buffer are not waste when they protect life. It means that just-in-time systems must be judged by whether they leave enough room for care and shock. It means that fiscal austerity must be judged by whether it destroys public capacity. It means that labor flexibility must be judged by whether it destroys life predictability. It means that ecological exploitation must be judged by whether it removes buffers that cannot be quickly restored.

Margin protection is one of the clearest places where life-coherent efficiency differs from false efficiency. False efficiency cuts margins to improve short-term metrics. Life-coherent efficiency protects margins to sustain long-term viability.

## 10.10 Coordinate

Life-coherent transformation cannot be achieved by isolated sectors. The conditions of life are interdependent. Health depends on housing, food, work, air, water, education, care, safety, trust, and climate. Education depends on health, nutrition, family stability, digital systems, culture, and meaning. Climate resilience depends on land use, finance, infrastructure, governance, social trust, and ecological restoration. Institutional trust depends on justice, transparency, service dignity, participation, and repair.

Coordination is therefore not administrative convenience. It is fidelity to life.

But coordination must not mean centralized control alone. It must mean coordination across scales and forms of knowledge: local communities, national institutions, regional bodies, scientific expertise, Indigenous and local knowledge, civil society, public agencies, private actors, and future-oriented guardianship.

In Maturanan terms, governance becomes a coordination of coordinations: the creation of shared conversations through which sectors, communities, institutions, and generations align their

actions around the conditions of life. A life-coherent society must create spaces in which sectors do not merely defend their mandates, but reorient around shared life goods.

The coordinating question is:

**What must each system stop, restore, redesign, and protect so that life-capacity expands across the whole field?**

## 10.11 Monitor and learn

The final movement is monitoring and learning. Life-coherent governance cannot assume that its actions will always produce intended effects. Living systems are complex. Policies interact. Institutions adapt. Metrics are gamed. New harms emerge. Ecological thresholds surprise. Communities reinterpret interventions. Technologies evolve. Power resists.

Therefore, monitoring must be continuous, participatory, and reflective. It must ask whether actions are actually reducing exposure, restoring repair, protecting margins, strengthening commons, reducing harm, and expanding life-capacity. It must also ask whether new burdens are being created.

Learning requires humility. A life-coherent framework must be willing to revise indicators, redesign policies, admit failure, listen to those affected, and de-implement its own mistakes. It must avoid becoming another closed system of expertise.

The action cycle is therefore iterative:

**Recognize → Rename → Measure → Expose → De-implement → Restore commons → Redesign affordances → Protect margins → Coordinate → Monitor and learn.**

This is not a linear checklist. It is a living cycle. Recognition leads to renaming; renaming improves measurement; measurement enables exposure; exposure identifies what must be stopped; de-implementation creates space for commons restoration; restored commons allow affordance redesign; better affordances protect margins; margins enable coordination; coordination requires learning; learning deepens recognition.

This is how measurement becomes transformation.

The next section turns from method to conversation. For no action cycle can endure unless it is grounded in the right patterns of language, emotion, and legitimate coexistence. The question becomes: what kind of conversation must societies sustain if they are to coordinate life-enabling action?

# Part XI — The Life-Coherent Conversation: Coordinating Action through Legitimate Coexistence

## 11. From consultation to life-coherent conversation

A life-coherent framework cannot be brought forth by indicators alone. It requires a different kind of conversation. More precisely, it requires a different pattern of language, emotion, attention, and institutional coordination through which societies can recognize what they are conserving and decide what must be transformed.

The UN Beyond GDP report rightly recognizes that implementation will require more than statistical refinement. Broader measures of progress must enter policy design, budgeting, national planning, accountability, public communication, and institutional decision-making. The agenda depends on governments, statistical offices, civil society, academia, media, communities, and the private sector (High-Level Expert Group on Beyond GDP, 2026).

Yet the form of participation matters. A society can convene stakeholders without transforming relations. It can consult communities while preserving decisions already made. It can invite feedback while retaining expert control. It can speak of well-being while conserving extraction. It can speak of sustainability while conserving ecological overshoot. It can speak of resilience while conserving abandonment. It can speak of equity while conserving burden displacement.

A life-coherent conversation must therefore be different in kind. It must not merely ask people to comment on indicators. It must ask all those affected to participate in revealing, naming, measuring, and transforming the relations through which life is being enabled or reduced.

Its guiding question is:

**What ways of living are we conserving, and do they enable life?**

### 11.1 Beyond technocratic consultation

Technocratic consultation usually begins after the basic architecture has already been framed. Experts define the problem, select the categories, determine the indicators, organize the process, and then invite affected groups to respond. This may improve legitimacy and provide useful feedback, but it does not necessarily change the deeper structure of knowing.

A life-coherent conversation begins earlier. It asks who has the authority to name the problem. It asks whose suffering counts as evidence. It asks whose knowledge is recognized as legitimate. It asks whether those most affected are being asked merely to validate an already established framework, or whether they are participating in bringing forth the distinctions by which the framework itself will operate.

This distinction is crucial. If a community lives with polluted water, the issue is not merely whether water quality appears in the dashboard. The issue is whether the community's experience of illness, distrust, ecological loss, institutional delay, cultural injury, and intergenerational fear is allowed to reshape what the dashboard means. If caregivers are exhausted, the issue is not merely whether unpaid care is counted. The issue is whether the society reorganizes work, public services, gender relations, health systems, and social protection around the reality that care is a life-supporting commons. If young people experience ecological anxiety, the issue is not merely whether subjective well-being declines. The issue is whether their perception of a foreclosed future is recognized as a rational response to life-ground degradation.

Technocratic consultation asks:

**What do stakeholders think of the framework?**

Life-coherent conversation asks:

**What world is the framework helping us bring forth, and who must be present for that world to be truthful?**

## 11.2 Legitimate coexistence of all those affected

The ethical ground of the life-coherent conversation is legitimate coexistence. All those affected must be recognized not as obstacles, beneficiaries, resources, externalities, populations, costs, or data points, but as participants in the web of life.

“All those affected” includes persons and communities, but it does not stop there. It includes children, elders, caregivers, workers, patients, teachers, farmers, migrants, disabled persons, Indigenous peoples, coastal communities, urban neighborhoods, future generations, ecosystems, watersheds, forests, reefs, soils, species, and the planetary systems that sustain life.

Not all can participate in the same way. A future generation cannot speak in a meeting. A reef cannot submit a policy brief. A forest cannot vote. But they can be represented through guardianship, ecological science, Indigenous and local knowledge, precaution, law, cultural memory, and moral imagination. Legitimate coexistence requires that the voiceless not be treated as valueless.

This matters for Beyond GDP because the report's ambition to make visible what GDP obscures is one of its strongest impulses. A life-coherent framework extends this impulse by insisting that visibility must lead to changed relations. The invisible must not merely become data. The voiceless must not merely become indicators. They must become morally and institutionally consequential.

Legitimate coexistence therefore asks:

Who is missing from the conversation?

Who cannot safely speak?

Who is spoken about but not heard?  
Who is represented only as cost, risk, or vulnerability?  
Which ecosystems are treated as background?  
Which future harms are discounted?  
Which forms of knowledge are excluded because they are not statistical?  
Which communities are over-consulted and under-heard?

A life-coherent conversation begins when these absences become intolerable.

### 11.3 Language, emotion, and the world being conserved

Maturana's terms "languaging" and "emotioning" remind us that human beings coordinate ways of living not only through information, but through recurring patterns of speech, feeling, attention, and relation. Public systems are held together by repeated conversations: about growth, scarcity, competition, discipline, productivity, risk, security, innovation, resilience, responsibility, and progress. These conversations are grounded in emotional orientations: fear, ambition, control, distrust, care, solidarity, humility, love, resentment, or indifference.

Changing indicators without changing the underlying language and emotional orientation may leave the same world intact.

A government may measure well-being while continuing to speak as if economic growth is the unquestioned master objective. A corporation may measure sustainability while continuing to treat ecological damage as an externality. A health system may measure patient experience while continuing to treat people as service users to be processed. A school system may measure belonging while organizing childhood around performance and competition. A development agency may measure inclusion while continuing to act from institutional superiority.

A life-coherent conversation must therefore bring forth a more truthful language.

Not "human resources," but persons with life-capacity.  
Not "natural resources," but life-ground.  
Not "externalities," but displaced harms.  
Not "stakeholders," but all those affected.  
Not "resilience" as adaptation to preventable harm, but repair and transformation.  
Not "efficiency" as cost reduction, but life goods with less life-loss.  
Not "capital" as accumulation, but life capital as regenerative life support.  
Not "peace" as silence, but conditions for life-capacity, dignity, repair, and coexistence.  
Not "progress" as system expansion, but flourishing within legitimate coexistence.

This language must be held in a different emotional ground. Its emotional ground cannot be domination, blame, institutional defensiveness, fear of political sensitivity, or competition for advantage. It must be care, humility, courage, solidarity, accountability, and love of life.

Without this shift, Beyond GDP risks becoming a more humane vocabulary for the same civilizational pattern. With this shift, it can become part of a new pattern of life.

## 11.4 The guiding conversational question

The life-coherent conversation can be guided by one question:

### **What ways of living are we conserving, and do they enable life?**

This question is deliberately broader than “How are we performing?” Performance can remain trapped inside existing goals. A society can perform well at the wrong task. It can efficiently conserve a harmful pattern. It can improve indicators while continuing to reproduce the conditions that make those indicators necessary.

“What ways of living are we conserving?” asks about continuity. It asks what patterns are being reproduced through policy, habit, infrastructure, markets, law, culture, education, media, technology, and institutional routine. It asks what remains stable despite reform language. It asks what is actually being maintained.

“Do they enable life?” then introduces the life-value criterion. The question is not whether the way of living is profitable, modern, competitive, efficient, popular, or historically familiar. The question is whether it enables life-capacity.

Does it enable people to breathe, drink, eat, sleep, learn, care, heal, belong, participate, and imagine a future?

Does it enable ecosystems to regenerate?

Does it enable institutions to repair harm?

Does it enable work to contribute without consuming the worker?

Does it enable technology to serve agency rather than capture it?

Does it enable communities to deliberate rather than fragment?

Does it enable future generations to inherit possibility rather than debt, heat, waste, and loss?

This question allows the paper’s whole architecture to become conversational.

## 11.5 The sequence of the life-coherent conversation

The conversation can unfold through seven movements.

First, **recognition**: What is suffering, degrading, disappearing, being overloaded, or being forced to adapt to preventable harm?

Second, **renaming**: What have we misnamed as growth, development, efficiency, resilience, innovation, consumer choice, or progress, when it is actually reducing life-capacity?

Third, **life-good clarification**: What universal life necessities must be secured here — air, water, food, shelter, care, safety, health, education, meaningful work, ecological belonging, play, culture, self-governing choice, and future possibility?

Fourth, **capital discernment**: Which forms of produced, human, social, institutional, natural, technological, and financial capital are life capital, and which are life-incoherent capital growing by harm?

Fifth, **exposure–repair–margins diagnosis**: Where are exposures rising? Where is repair blocked? Where are margins depleted? Who has time, safety, care, trust, money, ecological stability, and institutional support — and who does not?

Sixth, **capture and burden-displacement audit**: Who benefits? Who bears the burden? What is ignored? What harm is normalized? What commons are enclosed? What futures are foreclosed?

Seventh, **life-enabling coordination**: What must be de-implemented, restored, protected, redesigned, funded, governed, and learned so that life-supporting conditions become easier, safer, more accessible, and more repeatable?

This sequence mirrors the life-coherent action method, but it begins in conversation. It recognizes that action without conversation risks imposition, while conversation without action risks performance. Life-coherent transformation requires both.

## 11.6 A new civilizational utterance

Every civilization has master utterances: phrases that organize what can be imagined and justified. The GDP era was organized by utterances such as growth, productivity, competitiveness, development, modernization, efficiency, and investment. These words shaped policy and desire. They defined what counted as serious.

A life-coherent era requires a different utterance:

**Let us no longer ask life to justify itself before the economy. Let the economy, technology, law, policy, medicine, education, and governance justify themselves before life.**

This sentence reverses the order of accountability.

It does not reject economy, technology, law, policy, medicine, education, or governance. It places them in their proper role as instruments of life. They must justify themselves by what they enable and what they reduce. They must answer to life goods, life-capacity, civil commons, planetary boundaries, positive peace, and legitimate coexistence.

This utterance also protects against false abstraction. It reminds us that life is not an external sector. It is the ground. Economy is within life. Technology is within life. Institutions are within life. Measurement is within life. Policy is within life. No system stands above the conditions that make it possible.

## 11.7 From dashboards of decline to coordinated repair

The ultimate purpose of the life-coherent conversation is to move from dashboards of decline to coordinated repair.

A dashboard of decline can become paralyzing. It may show rising heat, falling biodiversity, worsening inequality, declining trust, increasing loneliness, poor mental health, and fragile institutions. Without a deeper action method, such information can produce despair, denial, polarization, or managerial fatigue.

A life-coherent conversation turns information into responsibility. It asks what relations must be repaired. It asks who must coordinate. It asks what harmful patterns must stop. It asks what commons must be rebuilt. It asks what margins must be protected. It asks what language must change. It asks what future must be made imaginable again.

This is how Beyond GDP becomes more than better measurement. It becomes a portal into a different civilizational practice.

The task is not merely to count what counts. It is to care for what counts, protect what sustains, repair what has been harmed, and coordinate what enables life.

The conversation required is therefore not a public-relations conversation, not a stakeholder-management conversation, not a compliance conversation, and not a technocratic measurement conversation. It is a life-coherent coexistence conversation.

Its purpose is to coordinate life-enabling action among all those affected.

Its guiding question is:

**What ways of living are we conserving, and do they enable life?**

Its promise is a movement:

From measuring output to enabling life.  
From managing populations to restoring relations.  
From capital accumulation to life-capital regeneration.  
From resilience under harm to de-implementation of harm.  
From stakeholder consultation to legitimate coexistence.  
From dashboards of decline to coordinated repair.

The next section turns to applications. If the framework is to be useful, it must be capable of guiding national development planning, public health, climate and planetary health, economic policy, education, technology, work, and the particular vulnerabilities and possibilities of Small Island Developing States and the Caribbean.

## Part XII — Applications: Applying Life-Coherent Progress Across Policy Domains

### 12. From framework to practice

A framework of progress is only as useful as its capacity to guide action where life is actually organized. The life-coherent deepening of Beyond GDP must therefore be applicable across domains: national development planning, public health, climate and planetary health, economic policy, education, technology, work, and the special context of Small Island Developing States and the Caribbean.

The UN Beyond GDP report rightly emphasizes that broader progress measures must be embedded across the policy cycle: diagnosis, strategic prioritization, policy design, implementation, monitoring, evaluation, budgeting, institutional coordination, and public communication (High-Level Expert Group on Beyond GDP, 2026). This is essential. Indicators that remain outside planning and budgeting become symbolic. Indicators that enter decision-making can begin to change what institutions see, value, fund, and repair.

A life-coherent framework accepts this implementation challenge, but adds a deeper test: policy must not merely become well-being-informed; it must become life-answerable. Every domain must ask whether its practices, incentives, infrastructures, technologies, and metrics expand or reduce life-capacity.

The applied question becomes:

**How should this domain be redesigned if its purpose is to secure life goods, regenerate life capital, reduce avoidable harm, protect civil commons, and support flourishing through legitimate coexistence?**

#### 12.1 National development planning

National development planning is one of the most important applications because it is where societies explicitly define what counts as progress. Conventional plans often organize around GDP growth, investment, competitiveness, employment, infrastructure, fiscal balance, export performance, and sectoral targets. These remain relevant, but they are insufficient if they are not subordinated to life goods, life capital, ecological thresholds, and intergenerational responsibility.

A life-coherent national development plan would begin with a different question:

**What life necessities must be secured for all, and what life-ground conditions must be protected for present and future generations?**

This shifts the planning hierarchy. Economic growth would no longer be the master objective. It would become one possible instrument for securing life goods. Infrastructure would be judged by whether it expands access to water, shelter, mobility, care, education, food, ecological safety, and participation. Investment would be judged by whether it strengthens life capital or generates life-incoherent capital. Fiscal policy would be judged by whether it protects civil commons, repair systems, and margins. Development would be judged by whether people and ecosystems become more capable of living well.

Such planning would require every major policy proposal to undergo a life-coherence review. Does it secure life necessities? Does it reduce harmful exposure? Does it strengthen repair capacity? Does it protect margins? Does it regenerate life capital? Does it avoid burden displacement? Does it respect planetary boundaries? Does it strengthen legitimate coexistence?

National planning would thereby become a public process for coordinating life-enabling conditions, not merely a technical exercise in economic management.

## 12.2 Public health and health systems

Public health is one of the most natural homes for the life-coherent framework because it already recognizes that health is shaped upstream. Yet public health can still become fragmented when organized around separate programs, risk factors, diseases, service targets, or behavior-change campaigns disconnected from the wider organism–niche relation.

A life-coherent public health approach would integrate social, ecological, commercial, digital, and institutional determinants into one field of analysis. It would ask how exposure is patterned, how repair is distributed, where margins are depleted, and which communities are being asked to adapt to preventable harm. Health would no longer be treated mainly as disease management, health-service output, or individual behavior. It would be understood as life-capacity enabled through the conditions in which people are born, grow, learn, work, care, age, and belong (Commission on Social Determinants of Health, 2008; World Health Organization, 1986).

This would reframe prevention. Prevention would not be limited to screening, vaccination, health education, or individual risk modification, though all may be important. Prevention would include food-system redesign, housing security, clean water, clean air, safe work, digital protection, care access, social trust, ecological restoration, and the removal of commercial and institutional practices that generate disease.

Health systems themselves would also be evaluated differently. A life-coherent health system would measure not only disease outcomes, service volumes, waiting times, and cost, but also dignity, trust, continuity, care burden, repair capacity, access without humiliation, and whether treatment plans restore life-capacity. It would de-implement low-value care, excessive administrative burden, unnecessary complexity, and practices that shift hidden work onto patients, families, and clinicians.

Public health would become the practice of protecting the conditions through which life can live, heal, participate, and flourish.

## 12.3 Climate and planetary health

Climate and planetary health reveal the inadequacy of GDP more starkly than almost any other domain. Economic activity may rise while the planetary systems that make economic activity possible are destabilized. A society may appear to prosper while emitting greenhouse gases, destroying biodiversity, degrading soils, warming oceans, contaminating water, and increasing disaster risk.

A life-coherent framework treats planetary boundaries as life-ground thresholds. They are not optional environmental considerations to be balanced after economic goals are set. They are conditions of continued life. A development pathway that breaches them cannot be called progress, regardless of GDP growth or short-term well-being gains (Rockström et al., 2009; Whitmee et al., 2015).

This has practical implications. Climate policy must be evaluated not only by emissions reduction, but by whether it protects life-capacity, equity, and repair. Adaptation must not become a way of normalizing harm imposed by others. Resilience must not mean asking vulnerable communities to absorb escalating risk without transforming the systems producing that risk. Mitigation must not deepen inequality. Renewable transitions must not reproduce extractive patterns through land dispossession, mineral exploitation, or sacrifice zones.

Planetary health also requires restoration. Mangroves, reefs, forests, wetlands, watersheds, soil systems, fisheries, and biodiversity are not passive environmental assets. They are life-supporting commons. Their restoration is not merely conservation; it is life-capital regeneration.

A life-coherent climate policy therefore asks: Are we reducing exposure? Are we restoring ecological repair systems? Are we protecting vulnerable margins? Are we preventing burden displacement across countries and generations? Are we preserving the life-ground for those not yet born?

## 12.4 Economic policy

Economic policy is the domain most in need of reordering. In conventional practice, economic success is often judged by growth, inflation control, employment levels, investment flows, productivity, fiscal balance, trade, and competitiveness. These are not irrelevant, but they are not final measures of progress.

A life-coherent economy is organized around the secure provision of life goods. It asks whether everyone has access to clean water, nourishing food, shelter, healthcare, education, care, meaningful work, ecological security, public knowledge, and participatory power. It distinguishes life capital from life-incoherent capital. It distinguishes real efficiency from burden shifting. It distinguishes wealth from accumulation.

This would change taxation, subsidies, budgeting, procurement, and investment. Harmful subsidies would be de-implemented. Public spending would be evaluated by life-capacity

returns, not only financial multipliers. Tax systems would be judged by whether they support civil commons and prevent extreme concentrations of power. Debt sustainability would be assessed not only by repayment ratios but by whether debt obligations undermine life goods, public services, ecological protection, and future viability. Investment incentives would be tied to life capital: local capability development, ecological regeneration, dignified work, care compatibility, and commons strengthening.

A life-coherent economy would still care about productivity, but it would ask: productivity of what, toward what, and at whose cost? Productivity that increases harmful commodities, ecological destruction, or human exhaustion is not progress. Productivity that increases nourishment, care, shelter, repair, knowledge, ecological restoration, and free time is progress.

The economic question becomes:

**How do we provision life goods with less life-loss?**

## 12.5 Education

Education is often treated as human capital formation, workforce preparation, skills development, and national competitiveness. These are partial truths, but they are inadequate. Education is one of the primary ways a society reproduces its world. It shapes what children learn to see, value, imagine, question, repair, and conserve.

A life-coherent education system would be judged by whether it expands life-capacity: thought, feeling, action, agency, creativity, ecological literacy, ethical discernment, relational competence, cultural memory, democratic participation, and meaningful skill. It would not reduce children to future workers, test scores, or competitive units in a credential economy.

This would reshape curriculum and school design. Ecological literacy would become foundational, not optional. Care, cooperation, emotional development, civic participation, digital discernment, and practical life skills would matter alongside literacy, numeracy, science, and the arts. Play would be understood as developmental life-capacity, not wasted time. Schools would become communities of belonging and inquiry, not only institutions of performance.

Education would also be evaluated by its effects on margins. Does schooling support sleep, mental health, curiosity, dignity, family life, and participation? Or does it produce anxiety, exclusion, debt, hierarchy, and loss of meaning? Does it prepare young people to adapt to a life-reducing world, or to participate in bringing forth a life-coherent one?

A life-coherent education system would help learners ask the master question of this paper:

**Does this way of living enable life to live?**

## 12.6 Technology and digital systems

Technology is not neutral. It reshapes organism–niche relations. It structures attention, knowledge, communication, memory, access, surveillance, labor, desire, identity, and power. A Beyond GDP framework that does not evaluate digital systems risks missing one of the major contemporary determinants of life-capacity.

A life-coherent approach does not reject technology. It asks what technology is for. Does it expand agency, understanding, care, accessibility, participation, creativity, and ecological responsibility? Or does it capture attention, extract data, manipulate behavior, intensify work, automate exclusion, deepen surveillance, and concentrate power?

This implies practical requirements: algorithmic accountability, contestability, bias assessment, human oversight, privacy protection, participatory design, public-interest digital infrastructure, and the de-implementation of addictive design and dark patterns. Digital efficiency must be judged by whether it reduces real burden for those affected, not merely administrative cost for institutions.

A digital transformation is not life-coherent if it excludes elders, burdens patients, surveils workers, manipulates children, automates denial of rights, fragments attention, or makes human assistance unavailable. Conversely, technology becomes life-coherent when it reduces burden, expands access, supports care, protects privacy, deepens knowledge, strengthens participation, and remains answerable to those affected.

The digital question becomes:

**Does this technology expand life-capacity, or does it reorganize life around capture, dependency, and control?**

## 12.7 Work and livelihoods

Work is central to life-capacity because it organizes income, time, dignity, contribution, identity, social relation, and bodily exposure. Yet conventional measurement often reduces work to employment status, wages, productivity, or labor-force participation. These are important but incomplete.

A life-coherent framework asks whether work enables or reduces life. Does it provide sufficient livelihood? Does it allow sleep, family life, care, health, learning, civic participation, and ecological responsibility? Does it offer dignity, voice, safety, meaning, and skill development? Does it contribute to real life goods? Or does it produce exhaustion, insecurity, injury, humiliation, disposability, ecological harm, and time poverty?

This changes how employment policy is evaluated. A country may have low unemployment while many workers remain poor, stressed, unsafe, overworked, underemployed, or unable to care for families. A gig economy may increase flexibility for some while producing precarity and

algorithmic control for others. Productivity growth may benefit owners while workers lose margins of life.

Life-coherent work policy would measure wage sufficiency, schedule predictability, occupational safety, commute burden, autonomy, voice, care compatibility, paid leave, exposure to heat and toxins, psychosocial demands, meaningful contribution, and whether work strengthens or depletes the civil commons.

Work should not merely sustain the economy. Work should participate in sustaining life.

## 12.8 Small Island Developing States and the Caribbean

Small Island Developing States make the limits of GDP especially visible. A small island economy may show growth while remaining acutely vulnerable to climate shocks, debt distress, import dependence, ecological degradation, tourism volatility, food insecurity, water stress, coastal erosion, biodiversity loss, health-system fragility, and external price shocks. GDP can rise in ways that obscure the depletion of the very life-ground on which island life depends.

The life-coherent framework is therefore especially relevant to the Caribbean.

For SIDS, progress cannot be judged adequately by output alone. It must be judged by the resilience of water systems, food systems, coastal ecosystems, public health, housing, energy, education, care, social trust, cultural continuity, and democratic institutions. It must account for external burden displacement: countries that contributed least to climate change often carry disproportionate exposure to sea-level rise, hurricanes, coral bleaching, heat, flooding, insurance retreat, and debt pressure.

A life-coherent SIDS framework would place ecological and social margins at the center. Mangroves, reefs, watersheds, beaches, fisheries, soils, and biodiversity are not scenic amenities. They are life capital. Public health systems, local agriculture, community networks, disaster preparedness, public trust, and regional cooperation are not secondary to development. They are survival infrastructure.

Tourism, a major economic sector in many Caribbean states, would be evaluated by life-coherent criteria. Does it strengthen local livelihoods, culture, ecosystems, water systems, food systems, and public revenue for civil commons? Or does it increase ecological pressure, housing costs, import dependence, cultural commodification, and vulnerability to external shocks? A tourism model that raises GDP while degrading reefs, beaches, water access, local housing, and social margins is life-incoherent capital.

For the Caribbean, the life-coherent question is not abstract. It is practical and urgent:

**How can island societies secure life goods, regenerate life capital, protect ecological thresholds, reduce external dependence, strengthen civil commons, and preserve future possibility under conditions of global instability they did not primarily create?**

This question could make the Caribbean a leading region in the transition from Beyond GDP to life-coherent progress. Its vulnerability is also epistemic strength. It reveals what larger economies often hide: economy, ecology, health, culture, and future are inseparable.

## 12.9 Application as life-coherent redesign

Across all these domains, the pattern is the same. A life-coherent application does not simply add new indicators to existing systems. It changes the object of attention.

The object is no longer only GDP, service output, sector performance, program delivery, economic efficiency, employment rate, test score, health statistic, or environmental account. The object is the life-system: the organism–niche relations through which persons, communities, ecosystems, institutions, and future generations are enabled or reduced.

This shift allows national planning to become life-answerable, public health to become more integrative, climate policy to become justice-oriented, economic policy to become provisioning-centered, education to become capability-forming, technology to become humane, work to become dignified, and SIDS development to become life-grounded.

The next section turns to the research and measurement agenda required to support this transformation. If the framework is to guide policy, it must generate evidence without becoming captured by metrics. It must measure life-capacity, life capital, exposure, repair, margins, civil commons, positive peace, life-incoherent capital, and burden displacement while remaining accountable to lived experience, ecological reality, and legitimate coexistence.

## Part XIII — Research and Measurement Agenda: Building a Life-Coherent Evidence Base

### 13. From indicators to living evidence

A life-coherent framework must be measurable, but it must not become imprisoned by measurement. This is a delicate balance. If the framework remains purely philosophical, it will not guide policy, budgets, institutions, public accountability, or collective learning. If it becomes merely technical, it risks becoming another dashboard detached from the living realities it is meant to serve.

The research and measurement agenda must therefore be guided by a double commitment: methodological rigor and fidelity to life. It must develop indicators that are valid, comparable, timely, disaggregated, and usable, while also recognizing that no indicator can exhaust the meaning of health, dignity, ecological belonging, care, repair, or flourishing.

The UN Beyond GDP report rightly emphasizes statistical development, national adoption, international coordination, better data availability, timeliness, disaggregation, methodological guidance, and capacity-building (High-Level Expert Group on Beyond GDP, 2026). A life-coherent framework builds on this practical agenda, but extends it into domains that are not yet adequately measured: life-capacity, life capital, civil commons, repair capacity, restorative margins, positive peace, life-incoherent capital, burden displacement, capture, and legitimate coexistence.

The central research question becomes:

**How can societies know whether their ways of living are enabling life-capacity or reducing it?**

#### 13.1 Indicator refinement

The first task is to refine indicators so that they reveal life-capacity rather than merely system performance.

Many existing indicators can be retained but reinterpreted. Life expectancy, educational attainment, income, employment, air quality, water access, poverty, inequality, trust, and subjective well-being all matter. But they should be placed within a deeper framework that asks whether life necessities are secure, whether repair is possible, whether margins are protected, and whether life-capacities are expanding.

For example, work indicators should go beyond employment status to include wage sufficiency, schedule predictability, occupational safety, commute burden, care compatibility, autonomy, dignity, and meaningful contribution. Health indicators should go beyond disease and mortality to include repair capacity, care access, continuity, dignity, sleep, mental health, and exposure

burden. Environmental indicators should go beyond asset valuation to include life-ground thresholds, ecosystem integrity, ecological restoration, and community dependence on local ecosystems. Institutional indicators should go beyond satisfaction and confidence to measure trustworthiness, access without humiliation, grievance redress, administrative burden, and repair after institutional harm.

The goal is not to create an unmanageable number of indicators. The goal is to ensure that each selected indicator is life-relevant and action-relevant.

A life-coherent indicator should answer at least one of these questions:

- Does it reveal access to life goods?
- Does it show expansion or reduction of life-capacity?
- Does it identify exposure burden?
- Does it reveal blocked repair?
- Does it show depleted margins?
- Does it distinguish life capital from life-incoherent capital?
- Does it expose structural or cultural harm?
- Does it identify burden displacement?
- Does it support de-implementation or repair?

If an indicator does none of these, its relevance to life-coherent progress should be questioned.

## 13.2 Participatory measurement

Life-coherent measurement must be participatory because those affected by harm often know what formal systems fail to see. Participation is not merely a legitimacy exercise. It is epistemically necessary.

Communities living with water insecurity know the difference between formal access and safe, reliable, trusted, affordable water. Patients know the difference between service availability and dignified care. Workers know the difference between employment and work that destroys health. Caregivers know the hidden costs of institutional fragmentation. Youth know whether education gives them a future or only pressure. Indigenous and local communities often know ecological change long before it appears in aggregated data.

Participatory measurement should therefore be built into the design, interpretation, and use of Beyond GDP indicators. This includes community-defined indicators, citizen-generated data, participatory mapping, deliberative forums, lived-experience panels, qualitative monitoring, and local validation of official measures.

Participation also protects against metric capture. When indicators are chosen only by institutions, they may reflect institutional convenience. When they are co-developed with those affected, they are more likely to reveal real burdens, exclusions, and repair needs.

A life-coherent measurement process should ask:

Who helped define the indicator?  
Whose experience shaped its meaning?  
Who can contest the data?  
Who interprets the result?  
What action follows from the finding?  
Does the process itself strengthen agency and trust?

Measurement should not extract information from communities. It should strengthen their capacity to name, understand, and transform the conditions of life.

### 13.3 Mixed-methods evidence

Life cannot be fully understood through quantitative indicators alone. Numbers are essential, but they must be complemented by narrative, ethnographic, ecological, historical, clinical, institutional, and participatory forms of evidence.

A life-coherent evidence base should therefore be mixed-methods by design.

Quantitative indicators can reveal trends, distributions, inequalities, and thresholds. Qualitative evidence can reveal meanings, experiences, humiliation, trust, fear, hope, institutional encounters, cultural loss, and the lived texture of exposure and repair. Ecological observation can reveal changes in reefs, forests, soils, watersheds, fisheries, and biodiversity. Historical analysis can reveal how present burdens were produced. Institutional analysis can reveal how rules, incentives, procedures, and accountability structures distribute life chances.

This is especially important for phenomena that resist simple measurement: dignity, cultural continuity, ecological grief, institutional harm, care burden, legitimate coexistence, spiritual or existential meaning, and loss of future possibility.

Mixed-methods evidence prevents the framework from mistaking the measurable for the real. It allows indicators to be interpreted in context. It also allows contradictions to surface. A community may show improved access on paper while qualitative evidence reveals fear, distrust, cost, or humiliation. A public service may show high satisfaction among users while excluding those unable to access it. A development project may show economic gains while community testimony reveals cultural loss and ecological anxiety.

Life-coherent research must therefore hold numbers and stories together.

### 13.4 Disaggregation and intersectionality

The UN Beyond GDP report emphasizes disaggregation as central to equity and inclusion (High-Level Expert Group on Beyond GDP, 2026). This is essential. Without disaggregation, averages conceal unequal burdens.

A life-coherent framework extends disaggregation beyond demographic breakdown. It asks for disaggregation by exposure, repair, margin, access, and burden.

Who is exposed to heat, pollution, violence, unsafe work, digital exclusion, debt, food insecurity, or administrative burden?

Who has access to repair through healthcare, care networks, legal redress, therapy, nature, rest, and social protection?

Who has margins of savings, time, housing security, social trust, mobility, and political voice?

Who bears overlapping deprivations?

Who experiences cumulative life-capacity reduction?

Intersectionality is essential because life burdens do not occur in single categories. Gender, class, race, ethnicity, disability, age, geography, migration status, occupation, and ecological vulnerability can combine to create distinct patterns of exposure and exclusion. A coastal elder living alone with disability, low income, water insecurity, and hurricane risk does not experience these as separate policy domains. They form one life condition.

A life-coherent dashboard should therefore identify not only inequality in outcomes, but inequality in the conditions that generate outcomes.

### 13.5 Longitudinal and intergenerational measurement

Progress must be measured through time. A society can improve current indicators while damaging future life. It can increase present income while depleting soil, water, trust, care, institutional capacity, or climate stability. It can raise test scores while increasing anxiety and reducing curiosity. It can expand infrastructure while creating long-term ecological vulnerability.

A life-coherent research agenda must therefore emphasize longitudinal and intergenerational measurement.

Longitudinal research should examine how exposure, repair, and margins accumulate across the life course. It should ask how early childhood conditions influence later health, learning, agency, and social participation. It should examine how chronic stress, food systems, ecological exposure, digital environments, and institutional burden become embodied over time. It should also study how repair interventions — such as early childhood support, housing security, community care, ecological restoration, and income stability — alter trajectories.

Intergenerational measurement should ask whether current systems transmit life capital or life-loss. Are children inheriting better health, stronger commons, stable climate, intact ecosystems, trustworthy institutions, cultural continuity, and meaningful futures? Or are they inheriting debt, heat, ecological degradation, loneliness, precarity, institutional brittleness, and narrowed imagination?

This requires indicators that look beyond annual performance and electoral cycles. Life-coherent progress cannot be reduced to short-term improvement. It must ask what is being handed forward.

## 13.6 Early warning signals

A life-coherent framework should develop early warning signals for margin depletion and system brittleness.

Many systems appear stable before they fail. A family appears to cope until one shock causes collapse. A health system appears efficient until a pandemic reveals lack of reserve. An ecosystem appears productive until a threshold is crossed. A democracy appears functional until trust erodes beyond repair. A workforce appears productive until burnout spreads. A youth population appears educated until despair, disengagement, or migration reveal loss of future.

Early warning indicators should track rising exposure, declining repair, and shrinking margins before collapse occurs.

Potential early warning signals include increasing household debt and declining savings; rising time poverty and sleep insufficiency; caregiver exhaustion; teacher, nurse, and public-service burnout; declining trust in institutions; increased loneliness and social isolation; rising youth despair or emigration intent; increased heat exposure and water stress; loss of biodiversity and ecosystem buffers; rising administrative burden; growing dependence on imported essentials; reduced public-health surge capacity; increased disaster recovery time; and declining participation in civic life.

Such indicators help shift governance from crisis response to life-system stewardship.

## 13.7 Life-incoherent capital detection

One of the most important research tasks is to develop methods for identifying life-incoherent capital.

Life-incoherent capital appears when monetary, institutional, technological, or infrastructural accumulation grows while life-capacity declines. Detecting it requires comparing apparent gains with hidden life-loss.

Research should therefore examine sectors where GDP or investment growth may conceal harm: housing, tourism, food systems, fossil energy, digital platforms, private healthcare, speculative finance, extractive industries, arms production, and certain forms of infrastructure development.

For each sector, researchers should ask:

- What life goods are produced?
- What life goods are undermined?
- Who gains financially?
- Who absorbs exposure?
- What commons are enclosed?
- What ecological thresholds are affected?

What care burdens are shifted?  
What future risks are created?  
Does the sector expand life-capacity or dependency?  
Does it require preventable harm to remain profitable?

This research would allow policymakers to distinguish genuine development from life-blind accumulation.

Tourism revenue may increase while water stress, housing costs, reef damage, import dependence, and cultural commodification worsen. Housing wealth may rise while shelter access declines. Digital productivity may increase while attention, mental health, and democratic discourse degrade. Each case requires life-capital analysis.

### 13.8 Life-coherent policy evaluation

Policy evaluation should be redesigned around life-coherent criteria.

Traditional policy evaluation often asks whether a program achieved stated outputs, improved selected outcomes, reduced cost, or increased efficiency. A life-coherent evaluation asks a wider set of questions:

Did the policy secure life necessities?  
Did it reduce harmful exposure?  
Did it restore repair capacity?  
Did it protect margins?  
Did it strengthen civil commons?  
Did it expand life-capacity?  
Did it reduce structural or cultural harm?  
Did it avoid burden displacement?  
Did it distinguish life capital from life-incoherent capital?  
Did it respect planetary boundaries?  
Did affected communities experience the policy as dignifying and empowering?  
Did it create new harms?  
What should be de-implemented?

This approach turns evaluation into ethical learning. It does not merely ask whether a program worked according to its own terms. It asks whether the terms themselves were life-coherent.

Such evaluation should be used in health policy, education reform, climate adaptation, housing development, digital governance, labor policy, social protection, public finance, environmental regulation, and national planning.

## 13.9 Research governance and institutional capacity

The life-coherent evidence base requires institutional capacity. National statistical offices, universities, civil society organizations, public agencies, community groups, regional bodies, and international organizations all have roles to play.

But governance of research must itself be life-coherent. Data systems should not extract information without returning value to communities. Indicators should not impose burdens on already overburdened institutions. Digital data should not violate privacy or enable surveillance. Artificial intelligence should not be used to classify, predict, or manage populations without accountability, transparency, and contestability.

Capacity-building should therefore include not only technical training, but ethical and participatory capacities: community engagement, qualitative research, ecological literacy, systems thinking, rights-based data governance, and public communication.

For Small Island Developing States and other capacity-constrained settings, the research agenda must be realistic. It should begin with a core set of life-coherent indicators that can be built from existing data, then progressively expand. It should support regional cooperation, shared methods, open tools, and capacity development. It should not create reporting burdens that consume the very institutional margins the framework seeks to protect.

## 13.10 A living evidence system

The aim is not to create a fixed measurement system for all time. The aim is to create a living evidence system.

Such a system would be scientifically rigorous, but open to revision. It would be statistically grounded, but not statistically imprisoned. It would include global comparability, but respect local meaning. It would combine indicators with stories, maps, ecological monitoring, institutional audits, and community knowledge. It would track outcomes, but also generative conditions. It would report decline, but also guide repair.

A living evidence system asks continuously:

- What is life telling us?
- What are our indicators failing to see?
- What harms are emerging?
- What repair is working?
- Where are margins thinning?
- Which commons are weakening?
- What forms of life-incoherent capital are expanding?
- What must be stopped, restored, redesigned, or protected?

This is how research becomes part of life-coherent governance.

The next section turns to discussion. It gathers the central argument: what the UN Beyond GDP agenda gets right, what remains missing, why life-coherence is the necessary next step, and how the danger of performative transformation can be avoided.

## Part XIV — Discussion: The Promise and Risk of the Beyond GDP Agenda

### 14. From measurement reform to life-coherent transformation

The UN Beyond GDP report marks an important historical threshold. It confirms, at the level of global institutional discourse, that GDP cannot continue to function as the master measure of progress. It acknowledges that economic growth can coexist with persistent inequality, environmental degradation, declining trust, social fragmentation, and threats to future well-being. It proposes a wider understanding of progress as equitable, inclusive, and sustainable well-being, and offers a dashboard organized around foundational principles, current well-being, equity and inclusion, and sustainability and resilience (High-Level Expert Group on Beyond GDP, 2026).

This is a real advance. It should not be dismissed. For decades, critics of GDP have argued that economic output is not the same as development, that market value is not the same as life value, that growth can conceal harm, and that ecological and social depletion can be hidden behind rising national income. The UN report gives official recognition to this critique and creates a pathway for governments, statistical systems, international organizations, civil society, and researchers to act upon it.

Yet the central argument of this white paper is that the move beyond GDP, while necessary, remains incomplete unless it is deepened into a life-coherent framework. The issue is not only that GDP is too narrow. The issue is that modern systems have often lacked a sufficient criterion for distinguishing real progress from system expansion, life capital from life-incoherent capital, peace from suppressed harm, efficiency from burden displacement, resilience from adaptation to preventable damage, and measurement from transformation.

The Beyond GDP agenda widens the compass. Life-coherence asks what the compass is for, what it must never sacrifice, what forms of life it must protect, and what world it helps bring forth.

#### 14.1 What the UN Beyond GDP framework gets right

The UN report gets several important things right.

First, it refuses to abandon GDP entirely while clearly limiting its meaning. GDP remains useful as a measure of economic activity, but it cannot answer questions about the quality, distribution, sustainability, or human meaning of that activity. This is a balanced position. It avoids the error of treating GDP as useless, while also resisting the deeper error of treating it as progress.

Second, the report properly frames progress as multidimensional. Health, education, work, security, subjective well-being, social cohesion, institutional quality, environmental quality, poverty, inequality, and sustainability cannot be reduced to one another. A single number cannot carry the full reality of persons, communities, institutions, and ecosystems.

Third, the report places peace, human rights, and respect for the planet at the foundation. This gives the framework normative seriousness. It recognizes that well-being cannot be detached from rights, security, ecological integrity, and the conditions of social cooperation.

Fourth, the report recognizes that future well-being depends on the maintenance and renewal of multiple forms of capital: produced, human, social, institutional, and natural. This helps shift attention from present flows to future conditions.

Fifth, the report emphasizes implementation. It recognizes that indicators matter only if they are used in policy, planning, budgeting, accountability, statistical systems, and public discourse. It also recognizes the need for capacity-building, disaggregation, timeliness, methodological development, and national ownership (High-Level Expert Group on Beyond GDP, 2026).

These are significant contributions. They provide the institutional opening through which a deeper life-coherent approach can enter.

## 14.2 What remains underdeveloped

What remains underdeveloped is not another list of indicators alone. What remains needed is a deeper architecture of value, causation, power, repair, and transformation.

The UN report measures well-being more broadly, but it does not fully ground well-being in life-value. It identifies domains that matter, but it does not sufficiently explain what makes them matter. a's life-value onto-axiology supplies this missing ground: what expands the range of life-capacity is value; what reduces, disables, or destroys it is disvalue (McMurtry, 2011a, 2011b, 2018).

The report identifies multiple forms of capital, but it does not fully distinguish life capital from life-incoherent capital. Produced, human, social, institutional, and natural capital are not automatically life-enabling. They may sustain life or reduce it. They may protect commons or enclose them. They may regenerate life goods or liquidate them. McMurtry's life capital provides the higher-order criterion: capital is life-coherent only when it secures life goods and expands life-capacity through time without cumulative life-loss.

The report includes peace, but its operationalization risks remaining too close to negative peace when focused primarily on conflict-related deaths. Galtung's work shows that peace must also address structural and cultural violence: the avoidable arrangements and legitimating narratives that reduce life chances without necessarily appearing as direct violence (Galtung, 1969, 1990).

The report values sustainability and resilience, but it does not fully distinguish resilience as life-capacity from resilience as forced adaptation to harm. A community may be praised as resilient while being abandoned to conditions it did not create. A life-coherent framework asks whether harms are being reduced and repaired, not merely endured.

The report recognizes institutions, but it does not fully theorize capture. Measurement systems can be captured. Metrics can be gamed. Commercial interests can shape what is counted.

Institutions can display concern while preserving harmful arrangements. Algorithmic systems can encode exclusion while appearing neutral. Cultural narratives can make structural harm appear natural or deserved. A life-coherent framework therefore requires capture audits, burden-displacement analysis, and de-implementation pathways.

Finally, the report widens measurement, but it does not fully transform the observer stance. Maturana reminds us that indicators are not neutral mirrors. They are distinctions made by observers within networks of language, emotion, power, and relation. The question is not only what is measured, but what pattern of life measurement helps conserve (Maturana, 1988; Maturana & Varela, 1980, 1987).

### 14.3 Why life-coherence is the necessary next step

Life-coherence is the necessary next step because it integrates what the Beyond GDP agenda leaves partly separated.

It integrates value and measurement. Indicators matter because they reveal whether life-capacity is being enabled or reduced.

It integrates capital and life. Wealth is not mere accumulation; it is the regenerative capacity of life goods, civil commons, ecosystems, institutions, relationships, and persons to support flourishing through time.

It integrates peace and health. Harm is not only war or assault; it is any avoidable arrangement that injures, constrains, degrades, or prevents life-capacity.

It integrates ecology and society. The planet is not an external environment but the life-ground of all value.

It integrates individual and collective well-being. Persons flourish through organism–niche relations: food, water, housing, care, work, culture, law, technology, institutions, ecosystems, and meaning.

It integrates measurement and action. A dashboard must lead to recognition, renaming, exposure, de-implementation, commons restoration, affordance redesign, margin protection, coordination, monitoring, and learning.

It integrates reason and emotion. A new measurement framework will not bring forth a new world unless it is grounded in a different emotional orientation: care, humility, solidarity, responsibility, love of life, and legitimate coexistence.

The life-coherent framework therefore does not compete with Beyond GDP. It completes its inner logic. If GDP asks how much economic activity is occurring, and Beyond GDP asks whether well-being, equity, and sustainability are improving, life-coherence asks whether the whole pattern of living is answerable to life.

## 14.4 The danger of performative transformation

The greatest danger facing the Beyond GDP agenda is not failure of measurement. It is performative transformation.

Performative transformation occurs when institutions adopt the language of change while conserving the relations that make change necessary. It occurs when dashboards are published, reports are launched, consultations are held, and commitments are declared, while the underlying systems of extraction, exclusion, depletion, and burden displacement remain intact.

A society can speak of well-being while preserving austerity.  
It can speak of sustainability while expanding extractive industries.  
It can speak of resilience while abandoning vulnerable communities to climate risk.  
It can speak of equity while leaving power untouched.  
It can speak of participation while consulting without transferring influence.  
It can speak of innovation while expanding surveillance and attention capture.  
It can speak of peace while ignoring structural violence.  
It can speak of capital while accumulating life-incoherent capital.  
It can speak of efficiency while shifting costs onto families, workers, ecosystems, and future generations.

This is why the life-coherent framework insists on de-implementation. Without stopping life-reducing practices, societies may simply add better indicators and remedial programs onto harmful structures. They may treat symptoms while preserving causes.

The test of seriousness is not whether a country can report a Beyond GDP dashboard. The test is whether the dashboard changes budgeting, law, regulation, institutional design, public investment, technological governance, education, health systems, ecological protection, and economic priorities. The test is whether harmful practices are exposed and stopped. The test is whether civil commons are restored. The test is whether margins are protected. The test is whether those bearing burdens gain voice, power, and repair.

Without this, Beyond GDP risks becoming a refined language for managing decline.

## 14.5 The promise of life-coherent progress

The promise of life-coherent progress is that it can convert the Beyond GDP opening into a deeper civilizational reorientation.

It allows societies to ask whether development is securing universal life necessities. It allows economies to be judged by life goods rather than output alone. It allows capital to be tested by whether it regenerates life-capacity. It allows efficiency to be reclaimed as the provision of more life goods with less life-loss. It allows peace to be measured as the reduction of avoidable life-harm. It allows ecological thresholds to become non-negotiable conditions of progress. It allows

governance to become the coordination of life-enabling conditions through the legitimate coexistence of all those affected.

This is not utopian in the weak sense. It is practical because every policy already affects life-capacity. Every budget already distributes exposure, repair, and margins. Every institution already enables or reduces access to life goods. Every technology already shapes attention, agency, and relation. Every economy already provisions some things and neglects others. The life-coherent framework simply makes these consequences explicit and answerable.

Its strength lies in the fact that it does not begin by asking society to abandon measurement, economics, technology, or institutions. It asks each of them to return to its proper role as an instrument of life.

The economy should provision life.

Technology should expand agency and care.

Law should protect dignity and commons.

Education should develop life-capacity.

Medicine should support healing and repair.

Governance should coordinate legitimate coexistence.

Measurement should reveal what life needs and whether it is being secured.

In this way, life-coherent progress offers a bridge from information to responsibility, from dashboards to repair, from growth to flourishing, and from domination to coexistence.

The next and final section gathers the argument into its concluding form: progress, wealth, peace, efficiency, and governance must all be re-grounded in life.

## Part XV — Conclusion: Re-Grounding Progress, Wealth, Peace, Efficiency, and Governance in Life

### 15. The measure, purpose, capital, and horizon of progress

The movement beyond GDP begins with a simple recognition: economic output is not the same as progress. GDP can measure production, income, expenditure, and market activity, but it cannot tell whether life is becoming more livable. It cannot tell whether children are safe, whether elders are cared for, whether ecosystems are regenerating, whether institutions deserve trust, whether work leaves room for care and meaning, whether communities can repair harm, or whether future generations inherit viable conditions of life.

The UN Beyond GDP report therefore marks an important turning point. It widens the global compass from economic output toward equitable, inclusive, and sustainable well-being. It invites societies to measure peace, human rights, respect for the planet, current well-being, equity and inclusion, and sustainability and resilience. This is necessary, timely, and institutionally significant (High-Level Expert Group on Beyond GDP, 2026).

But the movement beyond GDP must now go further. It must become life-coherent.

The central question is not only:

#### **What should we measure besides GDP?**

It is:

#### **Does this way of living enable life to live?**

Put more formally: do the dominant social, economic, technological, institutional, and ecological arrangements expand or reduce the life-capacities required for human and planetary flourishing?

This question changes the meaning of progress. Progress is not system expansion. It is not merely economic growth, technological acceleration, institutional performance, or even improved indicators. Progress is the expansion of life-capacity: the real capacity of persons, communities, ecosystems, and future generations to live, heal, develop, relate, participate, repair, create, and flourish within the web of life.

### 15.1 Reframing progress

Progress must be judged by whether life-capacity expands.

A society progresses when more people can breathe clean air, drink safe water, eat nourishing food, sleep securely, access care, learn, participate, work meaningfully, belong, create, repair harm, and live with dignity. It progresses when ecosystems regenerate, when institutions become

trustworthy, when public systems reduce burden, when cultural life deepens meaning, when technological systems expand agency, and when future generations inherit viable possibilities.

A society does not progress merely because its economy grows. It does not progress if growth depends on ecological degradation, care depletion, unsafe work, loneliness, humiliation, false efficiency, or burden displacement. It does not progress if well-being is purchased for some by life-loss for others. It does not progress if the present is made comfortable by narrowing the future.

Progress is real only when the conditions of life become more secure, more just, more regenerative, more participatory, and more capable of sustaining flourishing through time.

## 15.2 Reframing wealth

Wealth must be reframed as life capital.

The UN Beyond GDP framework rightly identifies produced, human, social, institutional, and natural capital as important to future well-being. Yet these forms of capital require a higher-order criterion. They are not automatically good. They can become life capital or life-incoherent capital.

Produced capital is life-coherent only when it expands access to life goods.

Human capital is life-coherent only when it expands life-capacity, not merely labor productivity.

Social capital is life-coherent only when it deepens inclusive trust, care, participation, and repair.

Institutional capital is life-coherent only when it protects rights, justice, commons, and accountability.

Natural capital is life-coherent only when it is honored as life-ground, not reduced to a substitutable asset.

True wealth is therefore not accumulation. True wealth is the regenerative capacity of a society to secure life goods and expand life-capacity without cumulative life-loss.

A society is wealthy when its water is clean, its food is nourishing, its air is breathable, its housing is secure, its care systems are strong, its people are healthy, its children are loved, its elders are dignified, its ecosystems are resilient, its institutions are trustworthy, its knowledge is shared, its work is meaningful, its culture is alive, and its future remains open.

## 15.3 Reframing peace

Peace must be reframed as the active reduction of avoidable life-harm.

The absence of war is necessary, but not sufficient. A society may be free of armed conflict and still be organized through preventable hunger, unsafe housing, toxic exposure, exploitative work, gendered violence, institutional humiliation, ecological degradation, commercial manipulation, digitally mediated exclusion, and cultural narratives that legitimize harm.

Galtung's insight is decisive: violence can be structural and cultural, not only direct (Galtung, 1969, 1990). A life-coherent framework extends this insight by understanding violence and harm as avoidable arrangements that injure, constrain, degrade, or prevent life-capacity.

Peace is therefore not mere quiet.  
Peace is not simply order.  
Peace is not adaptation to injustice.  
Peace is not the absence of protest.  
Peace is not resilience under preventable harm.

Peace is the presence of conditions through which life can unfold without avoidable reduction. It is food security, water security, shelter, care, safety, dignity, participation, ecological integrity, institutional repair, and freedom from humiliation. It is the capacity of communities to manage conflict without domination and to repair harm without abandonment.

## 15.4 Reframing efficiency

Efficiency must be reclaimed from life-blind accounting.

A process is not efficient merely because it lowers cost, increases output, accelerates delivery, reduces staff, increases profit, or improves a narrow performance indicator. It is efficient only if it increases life goods and life-capacity with less waste, less harm, less coercion, less burden displacement, and less life-loss.

Ecological efficiency secures life goods while reducing ecological damage.

Physical input-output efficiency secures life necessities with fewer materials, less energy, less space, less waste, less complexity, and less mandatory labor time.

Human development efficiency expands knowledge, health, dignity, creativity, free time, agency, care, participation, and life-range choice.

False efficiency cuts visible costs by increasing invisible burdens. Life-coherent efficiency reduces real burdens and strengthens the conditions of flourishing.

## 15.5 Reframing governance

Governance must be reframed as the coordination of life-enabling conditions through legitimate coexistence.

This means governance is not merely administration, regulation, service delivery, economic management, or crisis response. It is the collective coordination of the conditions through which life is enabled or reduced.

Life-coherent governance asks:

What life goods must be secured?  
What exposures must be reduced?  
What repair systems must be restored?  
What margins must be protected?  
What commons must be regenerated?  
What harmful systems must be de-implemented?  
What forms of life-incoherent capital must be exposed?  
What burdens are being displaced?  
Who is missing from the conversation?  
What future are we bringing forth?

Maturana's work reminds us that worlds are conserved through language, emotion, and recurrent relations (Maturana, 1988; Maturana & Varela, 1980, 1987). Therefore, life-coherent governance must be grounded not only in better indicators, but in a different emotional and relational orientation: care, humility, solidarity, accountability, and love of life.

Without this shift, new indicators may simply become new instruments of old control. With this shift, measurement can become part of a living process of recognition, repair, and transformation.

## 15.6 Final synthesis

The movement can now be summarized:

**GDP asks:** How much economic activity is occurring?

**Beyond GDP asks:** Are well-being, equity, sustainability, and resilience being measured?

**Life-coherent progress asks:** Are the relations of society organized so that life can live, heal, participate, repair, and flourish?

GDP measures output.

Beyond GDP widens the dashboard.

Life-coherence restores the purpose.

GDP counts activity.

Beyond GDP counts more dimensions of progress.

Life-coherence asks whether what is counted is answerable to life.

GDP can hide harm.

Beyond GDP can reveal harm.

Life-coherence asks what must be transformed so harm is no longer produced.

The task before the world is therefore not only to count what counts. It is to care for what counts, protect what sustains, repair what has been harmed, and coordinate what enables life.

The final principle is simple:

**Let us no longer ask life to justify itself before the economy. Let the economy, technology, law, policy, medicine, education, and governance justify themselves before life.**

The Beyond GDP agenda widens the compass of progress. A life-coherent framework deepens that compass by grounding it in life-value, life capital, positive peace, ecological limits, civil commons, and the practical transformation of the conditions through which life is enabled or reduced.

The ultimate measure, purpose, capital, and horizon of progress is the flourishing continuity of life.

# Back Matter

## Appendix A — Glossary of Core Terms

### Beyond GDP

A global movement to complement GDP with broader measures of social, ecological, institutional, and intergenerational progress. In the UN High-Level Expert Group report, Beyond GDP refers to a framework for measuring equitable, inclusive, and sustainable well-being through indicators of foundational principles, current well-being, equity and inclusion, and sustainability and resilience (High-Level Expert Group on Beyond GDP, 2026).

### Life-Coherent Progress

Progress understood as the expansion of life-capacity within the web of life. Life-coherent progress asks whether social, economic, technological, institutional, cultural, and ecological arrangements enable persons, communities, ecosystems, and future generations to live, heal, participate, repair, and flourish.

### Life-Coherence

The degree to which biological, psychological, relational, social, ecological, economic, technological, and institutional conditions enable rather than reduce life-capacity. Life-coherence does not mean uniformity, control, perfection, or static order. It means that the relations through which life is organized allow living beings, communities, ecosystems, and future generations to regulate, repair, develop, participate, and flourish.

### Life-Capacity

The real capacity of persons, communities, ecosystems, and future generations to live, heal, develop, relate, learn, participate, repair, create, belong, and flourish within the web of life. In the health framework from which this paper develops, health is defined as life-capacity enabled, healing as life-capacity restored, and flourishing as life-capacity expressed in dignity, relation, meaning, participation, and ecological belonging (Sahely, 2026).

### Life-Value

Value understood in relation to life-capacity. In McMurtry's life-value onto-axiology, something is valuable insofar as it enables a more coherently inclusive range of thought, feeling, and action; it is disvaluable insofar as it reduces, disables, or destroys such ranges of life (McMurtry, 2011a, 2011b, 2018). In this paper, life-value is used as the normative criterion for judging whether systems, policies, institutions, technologies, and economies truly support life.

## Life-Value Onto-Axiology

John McMurtry’s philosophical framework for grounding value in the conditions that enable life. “Onto-axiology” means an account of being and value together: what is real and what is good are understood through their relation to life-capacity. In this paper, life-value onto-axiology provides the evaluative foundation for deepening the Beyond GDP agenda.

## Life Goods

The concrete means, conditions, and relations required for human and ecological life to flourish. These include breathable air, clean water, nourishing food, shelter, sleep, care, safety, healthcare, education, meaningful work, cultural expression, ecological surroundings, participation, and self-governing choice. Life goods are not merely consumer preferences. They are conditions of life-capacity.

## Universal Human Life Necessities

The set of life goods required by all humans to live and flourish as human beings. McMurtry identifies these as including atmospheric, bodily, home, environmental, caring, educational, recreational, vocational, and social-justice conditions of life (McMurtry, 2011a, 2011b, 2018). In this paper, universal life necessities provide a concrete grounding for what Beyond GDP indicators must ultimately secure.

## Life Capital

The cumulative and regenerative stock of life goods, life-supporting relations, civil commons, ecological systems, knowledge, care, institutions, and capabilities that enable life-capacity to expand through time without cumulative life-loss. Life capital is the deeper criterion by which produced, human, social, institutional, and natural capital must be judged.

## Life-Incoherent Capital

Any form of monetary, technological, institutional, infrastructural, social, or political accumulation that grows while reducing life-capacity, degrading ecosystems, enclosing commons, exhausting care, manipulating attention, increasing dependency, or displacing burdens onto vulnerable communities, workers, ecosystems, other countries, or future generations. Earlier drafts used “false capital”; the final framing uses “life-incoherent capital” as the primary term, while retaining “false capital” only where McMurtry’s contrast is being explained.

## Civil Commons

Shared life-support systems that enable universal or equitable access to life goods without requiring private purchasing power as the primary condition of access. Examples include public

health, education, clean water, breathable air, public knowledge, libraries, parks, ecological protections, care systems, sanitation, legal access, social security, and accountable governance.

## Life-Ground

The ecological and planetary conditions that make all life possible: air, water, soil, climate stability, biodiversity, oceans, forests, reefs, watersheds, microbial life, and the broader web of Earth systems. In this paper, the life-ground is not treated merely as “natural capital,” but as the non-substitutable condition of all value.

## Planetary Boundaries

Biophysical limits within which human societies can operate without risking destabilization of Earth systems. In a life-coherent framework, planetary boundaries are not optional environmental constraints; they are life-ground thresholds that condition whether progress is real.

## Sustainability Mirage

A false appearance of sustainability that occurs when gains in economic, produced, or human capital conceal losses in natural capital, ecological integrity, social trust, care, or future viability. The UN Beyond GDP report explicitly warns against this risk in relation to capital accounting (High-Level Expert Group on Beyond GDP, 2026).

## Positive Peace

Peace understood not merely as the absence of direct violence, war, or conflict-related deaths, but as the presence of just, life-enabling conditions that reduce structural and cultural violence. In this paper, positive peace is translated as the reduction of avoidable life-harm and the protection of conditions for dignity, repair, participation, and coexistence.

## Negative Peace

The absence or reduction of direct violence, armed conflict, or physical insecurity. Negative peace is necessary but insufficient. A society may have low conflict deaths and still be organized through structural, cultural, ecological, commercial, institutional, or digitally mediated harms.

## Structural Violence

Avoidable harm built into social, economic, political, legal, institutional, or ecological arrangements. Structural violence reduces life-capacity without requiring a single visible perpetrator. Examples include preventable poverty, unsafe housing, food insecurity, inaccessible care, exploitative work, racialized exclusion, ecological exposure, and institutional abandonment.

## Cultural Violence

Narratives, symbols, ideologies, norms, or forms of knowledge that legitimize or normalize direct or structural violence. Cultural violence makes preventable harm appear natural, deserved, necessary, efficient, traditional, or invisible (Galtung, 1990).

## Ecologically Mediated Harm

The degradation of ecosystems and life-ground conditions in ways that harm present and future life. Climate destabilization, pollution, biodiversity loss, water contamination, soil depletion, reef destruction, toxic exposure, and land degradation can all reduce life-capacity when they damage the conditions through which life is sustained.

## Commercially Mediated Harm

Life-capacity reduction generated or amplified by commercial systems, profit incentives, and market practices. Examples include harmful commodity promotion, ultra-processed food environments, addictive design, predatory debt, fossil-fuel disinformation, exploitative labor systems, and corporate capture of public policy.

## Digitally Mediated Harm

Life-capacity reduction produced or amplified by digital systems, automated decision-making, surveillance, discriminatory algorithms, attention capture, misinformation, or opaque platform governance. Digitally mediated harm may appear technical or neutral while producing exclusion, manipulation, loss of agency, or institutional denial.

## Organism–Niche Relation

The recurrent relation between living beings and the conditions through which their life is sustained, stressed, injured, repaired, or transformed. The niche includes food, water, air, shelter, care, culture, work, law, technology, institutions, ecosystems, meaning, and history. This concept is central to the life-coherent framework.

## Structural Coupling

A concept associated with Maturana and Varela describing the recurrent relations through which living systems and their medium change together while the living system conserves its organization (Maturana & Varela, 1980, 1987). In this paper, structural coupling helps explain why progress cannot be understood apart from the relations between persons, communities, institutions, technologies, and ecosystems.

## Languaging

Maturana's term for the human domain of coordinating action through language. Language is not merely description; it helps bring forth worlds through recurrent coordination. In this paper, languaging matters because the words used for growth, efficiency, resilience, capital, development, and peace shape what societies can see and transform.

## Emotioning

Maturana's term for the emotional ground from which reasoning, action, and social coordination arise. A dashboard grounded in fear, control, or competition will bring forth a different world than one grounded in care, humility, solidarity, and love of life. Emotioning is therefore central to the ethical use of Beyond GDP indicators.

## Legitimate Coexistence

The acceptance of others as legitimate participants in the web of life. In this paper, legitimate coexistence includes persons, communities, workers, caregivers, children, elders, disabled persons, Indigenous peoples, ecosystems, other species, and future generations. It is the relational ground of life-coherent governance.

## Exposure Burden

The cumulative physical, chemical, biological, nutritional, psychosocial, commercial, digital, institutional, cultural, political, and ecological pressures that living beings, communities, institutions, and ecosystems must absorb.

## Repair Capacity

The biological, relational, institutional, ecological, and cultural resources that allow systems to recover, heal, restore, regenerate, and learn after exposure or harm. Repair includes sleep, care, healthcare, therapy, social support, restorative justice, ecological restoration, institutional redress, and community healing.

## Margins

The reserves of time, energy, safety, trust, money, care, ecological stability, institutional capacity, public-health reserve, democratic space, and social support that allow systems to absorb disturbance without collapse. Margins are not inefficiencies; they are conditions of resilience, repair, and freedom.

## Exposure–Repair–Margins Logic

The generative logic of the life-coherent framework: life is sustained when exposures remain within restorative capacity and margins are protected. Breakdown becomes more likely when cumulative exposure exceeds repair capacity and margins are depleted.

## Life-Coherent Efficiency

Efficiency redefined as the increasing provision of life goods and life-capacity with diminishing waste, ecological harm, coercion, burden displacement, and life-loss. Life-coherent efficiency includes ecological efficiency, physical input-output efficiency, and human development efficiency.

## Ecological Efficiency

The capacity to secure genuine life goods while reducing ecological burden, waste, toxicity, extraction, carbon emissions, biodiversity loss, and ecosystem degradation. Ecological efficiency is valid only within life-ground thresholds.

## Physical Input-Output Efficiency

The capacity to secure equal or greater life goods with fewer materials, less energy, less land, less infrastructure burden, less waste, less complexity, and less mandatory labor time.

## Human Development Efficiency

The capacity of systems to expand human life-capacity: health, knowledge, dignity, agency, creativity, care, participation, free time, meaning, and life-range choice.

## Burden Displacement

The shifting of costs, exposures, risks, labor, ecological damage, or future consequences onto people, communities, ecosystems, countries, or generations that do not receive corresponding benefits or decision-making power.

## Capture

The distortion of systems, indicators, institutions, policies, or knowledge by concentrated power, commercial interests, bureaucratic incentives, professional silos, algorithms, or cultural narratives. Capture causes systems to appear successful while reducing life-capacity elsewhere.

## Metric Capture

A form of capture in which institutions optimize what is measured while neglecting what matters. Metric capture can turn indicators into targets that distort care, policy, education, research, or governance.

## Measurement Harm

Harm produced when measurement systems misrecognize, erase, misclassify, overburden, or punish those they claim to represent. Measurement harm occurs when life is forced to fit categories that conceal its real conditions.

## Implementation Harm

Harm produced when policies or programs are implemented in ways that burden, humiliate, exclude, fragment, or disempower the people they are meant to serve.

## Resilience-as-Adaptation

A misuse of resilience language in which people or communities are praised for adapting to preventable harm rather than the harm being removed. Life-coherent resilience requires repair and transformation, not merely endurance.

## De-Implementation

The deliberate phasing out, stopping, or redesign of policies, practices, subsidies, technologies, institutional routines, or commodities that reduce life-capacity. De-implementation is essential because not all harmful systems should be improved; some should be ended.

## Affordance

A condition in the surrounding niche that makes certain actions easier, safer, meaningful, supported, or repeatable. Life-coherent policy redesigns affordances so that nourishment, care, movement, sleep, participation, ecological contact, and repair become easier rather than harder.

## Life-Coherent Action Cycle

The practical cycle proposed in this paper: recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, monitor, and learn.

## Life-System Diagnostic

A way of using indicators not merely to report outcomes, but to diagnose the relations generating those outcomes. A life-system diagnostic asks where life-capacity is being enabled or reduced, where exposure is rising, where repair is blocked, where margins are depleted, where commons are enclosed, and where burdens are displaced.

## From Beyond GDP to Life-Coherent Progress

The proposed next step after Beyond GDP: a life-coherent framework that does not merely complement GDP with well-being indicators, but grounds progress in life-value, life-capacity, life capital, positive peace, ecological thresholds, civil commons, repair, margins, and legitimate coexistence.

## Appendix B — The Life-Capital Audit

### Purpose

The Life-Capital Audit is designed to evaluate whether a form of capital, policy, institution, technology, investment, sector, or development pathway genuinely expands life-capacity or merely accumulates monetary, infrastructural, institutional, or technological power while shifting harm elsewhere.

It deepens the UN Beyond GDP capital distinctions — produced, human, social, institutional, and natural capital — by applying a life-value criterion: capital is life-coherent only if it secures life goods and expands life-capacity through time without cumulative life-loss.

The audit may be used in national planning, public budgeting, infrastructure review, health policy, education reform, climate policy, digital governance, tourism development, institutional assessment, and community-level decision-making.

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### B.1 The Core Life-Capital Question

For any proposed or existing form of capital, ask:

**Does this capital secure life goods, expand life-capacity, strengthen civil commons, regenerate through time, respect ecological thresholds, and avoid burden displacement?**

If yes, it may be considered **life capital**.

If no, it may be **life-incoherent capital**, requiring redesign, regulation, de-implementation, or transformation.

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### B.2 Seven Audit Tests

#### *1. The Life-Good Test*

**Question:**

Does this capital directly or indirectly secure universal life necessities?

These include clean air, safe water, nourishing food, shelter, sleep space, sanitation, healthcare, care and social inclusion, education, public knowledge, meaningful work, safety, ecological surroundings, culture, art, play, participation, and self-governing choice consistent with the provision of these goods for others.

**Interpretation:**

Capital that does not secure life goods may still have market value, but its life-value is uncertain. Capital that undermines life goods is life-incoherent.

**Example:**

A water system that provides safe, affordable, reliable access is life capital. A privatized water arrangement that excludes poor households or degrades watersheds may be life-incoherent capital.

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### *2. The Life-Capacity Test*

**Question:**

Does this capital expand the real capacities of people and communities to live, heal, learn, care, participate, repair, create, belong, and flourish?

**Interpretation:**

The test asks whether capital expands the range of thought, feeling, action, dignity, agency, relation, and meaning.

**Example:**

An education system is life capital when it expands understanding, imagination, practical competence, ecological literacy, democratic participation, and self-development. It is distorted when it mainly produces credentials, anxiety, debt, or labor-market sorting.

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### *3. The Access Test*

**Question:**

Is access to the life goods generated by this capital universal, equitable, dignified, and secure?

**Interpretation:**

A form of capital may generate life goods, but only for those with wealth, status, location, citizenship, race, gender, digital access, or institutional privilege. If access is exclusionary, the capital remains life-incomplete.

**Example:**

A modern hospital is not fully life capital if large parts of the population cannot access care without debt, delay, humiliation, transport barriers, language barriers, or discrimination.

---

#### *4. The Reproduction-Through-Time Test*

**Question:**

Does this capital regenerate life goods through time without cumulative ecological, social, biological, psychological, or institutional loss?

**Interpretation:**

A capital stock that produces present benefits by depleting future conditions is not true capital. It is liquidation.

**Example:**

Industrial agriculture may produce high short-term yields, but if it depletes soil, pollutes water, reduces biodiversity, harms farmworkers, and increases chronic disease, its capital status is life-incoherent.

---

#### *5. The Civil Commons Test*

**Question:**

Does this capital strengthen shared life-support systems, or does it privatize, enclose, weaken, or commodify them?

**Interpretation:**

Civil commons are the infrastructures through which life goods are secured collectively: water, public health, education, public knowledge, ecological protection, care systems, parks, sanitation, legal access, and accountable governance.

**Example:**

A public library, open educational platform, community clinic, protected watershed, or universal public-health system is civil-commons life capital. A system that encloses knowledge, care, or ecological access behind private payment weakens life capital.

---

#### *6. The Burden-Displacement Test*

**Question:**

Does this capital export costs, exposures, risks, labor, or ecological damage onto workers, caregivers, marginalized communities, ecosystems, other countries, or future generations?

**Interpretation:**

Capital is not life-coherent if one group's well-being is purchased by another group's life-loss.

**Example:**

A wealthy country's low-cost consumption may depend on exploited labor, toxic production

zones, carbon emissions, waste exports, or ecological degradation elsewhere. That is burden displacement, not true progress.

---

### *7. The Life-Incoherent Capital Test*

**Question:**

Does this capital grow monetarily, technologically, institutionally, or politically while reducing life-capacity?

**Interpretation:**

Life-incoherent capital often appears as growth, innovation, competitiveness, or efficiency. It must be identified by its life consequences.

**Examples:**

Housing wealth that increases while homelessness rises.

Digital platforms that grow by attention capture and misinformation.

Food industries that profit from disease-generating products.

Tourism growth that degrades reefs, water systems, housing access, and local culture.

Institutional systems that become more efficient by shifting burdens onto users.

---

### *B.3 Capital-Specific Audit Questions*

#### *Produced Capital*

**Examples:** Infrastructure, housing, transport, energy systems, buildings, machinery, digital infrastructure.

Ask:

Does it secure life necessities?

Does it reduce or increase ecological burden?

Does it strengthen local resilience?

Does it support access, dignity, and participation?

Does it create long-term dependency, exposure, or maintenance burdens?

Does it serve public life or primarily private accumulation?

**Life-coherent produced capital:** safe housing, renewable community energy, accessible transport, water infrastructure, health facilities, schools, public digital infrastructure.

**Life-incoherent produced capital:** luxury real estate that worsens housing exclusion; fossil infrastructure; extractive tourism infrastructure; surveillance systems; roads that deepen car dependency and ecological fragmentation.

---

## *Human Capital*

**Examples:** Health, education, skills, knowledge, creativity, bodily and mental capacity.

Ask:

Does it expand life-capacity or merely labor productivity?

Does it deepen agency, imagination, care, and participation?

Does it support health and repair?

Does it reduce people to employability?

Does it create debt, stress, exclusion, or competition without life development?

**Life-coherent human capital:** public education, ecological literacy, health promotion, arts, vocational dignity, care skills, civic learning.

**Life-incoherent human capital:** training for destructive industries; education reduced to credential competition; health valued only for productivity; exploitative “upskilling” that shifts risk onto workers.

---

## *Social Capital*

**Examples:** Trust, relationships, networks, reciprocity, belonging, mutual aid, civic culture.

Ask:

Does it expand inclusive trust and legitimate coexistence?

Does it support care, repair, participation, and solidarity?

Does it exclude outsiders?

Does it silence dissent or hide abuse?

Does it reproduce privilege, patronage, or domination?

**Life-coherent social capital:** mutual aid, community care networks, intergenerational solidarity, participatory governance, restorative practices.

**Life-incoherent social capital:** exclusionary networks, corruption, caste privilege, racist solidarity, patriarchal control, elite capture.

---

## *Institutional Capital*

**Examples:** Law, governance, public administration, rights systems, public services, accountability mechanisms.

Ask:

- Does the institution deserve trust?
- Does it protect rights and life goods?
- Does it reduce or impose administrative burden?
- Does it repair harm?
- Does it enable participation and contestation?
- Does it protect commons or enclose them?
- Does it serve life or protect system power?

**Life-coherent institutional capital:** rights-based public services, transparent governance, legal aid, participatory budgeting, public-health systems, independent accountability bodies.

**Life-incoherent institutional capital:** punitive welfare systems, inaccessible courts, corrupt procurement, captured regulators, institutions that protect property while abandoning life.

### *Natural Capital / Life-Ground*

**Examples:** Air, water, soil, climate, biodiversity, reefs, forests, wetlands, oceans, watersheds.

Ask:

- Is this being treated as life-ground or merely as an asset?
- Are ecological thresholds respected?
- Is regeneration occurring?
- Are local communities protected and included?
- Are harms displaced across regions or generations?
- Can loss here truly be substituted by produced or financial capital?

**Life-coherent natural capital:** protected watersheds, restored reefs, mangroves, biodiversity corridors, regenerative agriculture, clean air, living soils.

**Life-incoherent natural-capital framing:** offset schemes that permit ongoing destruction; valuation methods that make ecosystems tradable; extractive projects justified by compensation; treating extinction as a portfolio adjustment.

## B.4 Scoring Guide

For practical use, each test may be scored:

Score	Interpretation
+2	Strongly life-enabling: clearly secures life goods, expands life-capacity, and regenerates life capital.

+1	Partially life-enabling: provides some life goods but requires safeguards, redesign, or improved access.
0	Ambiguous or mixed: benefits and harms are unclear or evenly balanced; more evidence is required.
-1	Life-incoherent risk: generates life goods for some while creating significant burden, exclusion, or degradation.
-2	Life-incoherent capital: grows through life-reducing effects, commons enclosure, ecological harm, or burden displacement.

A project, policy, or sector should not be approved as life-coherent if it scores negatively on planetary thresholds, burden displacement, or universal access to basic life goods, even if it scores positively elsewhere.

### B.5 Summary Matrix

<b>Audit Dimension</b>	<b>Core Question</b>	<b>Life-Coherent Signal</b>	<b>Warning Signal</b>
Life goods	Does it secure necessities?	Universal access to real means of life	Commodities without life value
Life-capacity	Does it expand thought, feeling, action, repair, and participation?	Greater agency, dignity, health, learning	Dependency, exhaustion, humiliation
Access	Who can benefit?	Equitable, dignified, secure access	Exclusion by price, status, geography
Reproduction through time	Does it regenerate?	Long-term renewal	Present gain, future loss
Civil commons	Does it strengthen shared life systems?	Public goods and commons protected	Privatization and enclosure
Burden displacement	Who bears the cost?	Costs internalized and justly shared	Harm shifted to vulnerable others
Life-incoherent capital	Does it grow by reducing life?	Life-value increases with growth	Monetary growth with life-loss

### B.6 Final Life-Capital Determination

After completing the audit, classify the capital as one of the following:

*Life Capital*

The capital clearly secures life goods, expands life-capacity, strengthens civil commons, regenerates through time, and avoids burden displacement.

### *Conditional Life Capital*

The capital has life-enabling potential but requires safeguards, redesign, regulation, equity measures, or ecological limits.

### *Mixed Capital*

The capital produces both life goods and life harms. It requires deeper review, participatory assessment, and redesign.

### *Life-Incoherent Capital*

The capital grows by reducing life-capacity, degrading ecosystems, enclosing commons, displacing burdens, or undermining future life. It should be de-implemented, transformed, or prohibited.

---

## B.7 Closing Principle

The Life-Capital Audit rests on one principle:

**No capital is life capital unless it enables life-capacity through time without cumulative life-loss.**

This principle allows the Beyond GDP agenda to move from measuring multiple capital stocks to discerning whether those stocks are genuinely life-enabling. It transforms capital accounting into life-accountability.

## Appendix C — The Life-Coherent Efficiency Module

### Purpose

The Life-Coherent Efficiency Module translates life-coherent efficiency into a practical evaluative tool for Beyond GDP policy, planning, investment, institutional reform, and sector review.

Its purpose is to distinguish **real efficiency** from **false efficiency**.

Real efficiency increases the provision of life goods and life-capacity with diminishing waste, ecological burden, coercion, unnecessary complexity, mandatory life-time loss, and burden displacement.

False efficiency increases output, speed, profit, administrative performance, or cost savings by shifting hidden burdens onto people, caregivers, workers, communities, ecosystems, other countries, or future generations.

This module complements the UN Beyond GDP dashboard by asking not only whether well-being, equity, sustainability, and capital stocks are improving, but **how** those outcomes are being produced.

---

### C.1 The Core Efficiency Question

For any policy, institution, technology, sector, or development pathway, ask:

**Does this process secure more genuine life goods and life-capacity with less waste, less harm, less coercion, less ecological burden, less mandatory life-time loss, and less burden displacement?**

If yes, the process is moving toward life-coherent efficiency.

If no, it may be efficient only within a narrow accounting frame while remaining inefficient in life terms.

---

### C.2 The Three Domains of Life-Coherent Efficiency

#### 1. *Ecological Efficiency*

**Definition:**

The capacity to secure genuine life goods while reducing ecological burden, waste, toxicity, extraction, carbon emissions, biodiversity loss, and ecosystem degradation.

**Core question:**

How much life-good is secured per unit of ecological burden?

**Relevant life goods:**

Clean water, nourishing food, breathable air, shelter, mobility, energy access, health, safety, ecological belonging, and intergenerational viability.

**Warning:**

A system is not ecologically efficient merely because it produces the same commodity with slightly lower emissions if total ecological harm continues to rise or if life-ground thresholds are breached.

---

## *2. Physical Input-Output Efficiency*

**Definition:**

The capacity to secure equal or greater life goods with fewer materials, less energy, less land, less infrastructure burden, less waste, less complexity, and less mandatory labor time.

**Core question:**

How much life necessity is secured per unit of material, energy, space, infrastructure, administrative complexity, and compulsory work time?

**Relevant life goods:**

Shelter, transport, food, care, education, healthcare, public access, communication, sanitation, and public safety.

**Warning:**

A process is not physically efficient if it reduces institutional cost while shifting time, confusion, risk, or unpaid labor onto patients, families, workers, citizens, or communities.

---

## *3. Human Development Efficiency*

**Definition:**

The capacity of systems to expand human life-capacity: health, knowledge, dignity, agency, care, creativity, free time, participation, meaning, and life-range choice.

**Core question:**

Does this process develop human beings and communities, or does it consume them?

**Relevant life goods:**

Health, education, meaningful work, care, belonging, public knowledge, culture, play, agency, participation, and repair.

**Warning:**

A system is not humanly efficient if it increases productivity by producing exhaustion, stress, precarity, loss of sleep, loss of care time, humiliation, or alienation.

---

### C.3 Efficiency Audit Questions

For any policy, project, institution, or sector, apply the following questions.

#### *A. Life-Good Output*

What genuine life goods does the process produce?

Does it produce nourishment, shelter, health, care, knowledge, safety, ecological restoration, meaningful work, participation, or repair?

Or does it primarily produce commodities, transactions, data, returns, or outputs with weak or ambiguous life-value?

---

#### *B. Ecological Burden*

What ecological costs are generated?

Consider greenhouse gas emissions, water use, energy use, land use, waste, toxicity, biodiversity loss, soil degradation, reef, forest, wetland, or watershed damage, climate vulnerability, and long-term ecological thresholds.

---

#### *C. Material and Energy Throughput*

How much material, energy, infrastructure, and logistical complexity is required to produce the life good?

Could the same or greater life good be secured with less throughput, simpler design, repairability, reuse, circularity, or local resilience?

---

#### *D. Mandatory Time Burden*

How much human life-time does the system require?

Does it save time for life, or does it consume time through commuting, waiting, form-filling, bureaucracy, unpaid care burden, digital self-service, or precarious scheduling?

Time is a life medium. A process that saves institutional time by consuming citizen time may be falsely efficient.

---

### *E. Care Burden*

Does the process support care, or does it shift care invisibly onto families, women, communities, or unpaid workers?

Does it increase caregiver strain?

Does it reduce care quality?

Does it make care more dignified, shared, and sustainable?

---

### *F. Repair Capacity*

Does the process strengthen or weaken repair?

Does it support sleep, recovery, healthcare, ecological restoration, institutional redress, social support, conflict repair, and learning?

Or does it produce chronic exposure without adequate repair pathways?

---

### *G. Margin Protection*

Does the process preserve margins of time, safety, trust, staffing, money, ecological buffers, public-health capacity, and institutional reserve?

Or does it cut margins in the name of short-term efficiency?

---

### *H. Burden Displacement*

Who absorbs hidden costs?

Workers?

Caregivers?

Poor households?

Patients?

Teachers?

Nurses?  
 Migrants?  
 Small islands?  
 Ecosystems?  
 Future generations?

If the system looks efficient only because burdens are displaced, it is not life-coherently efficient.

### *I. Human Development*

Does the process expand people’s knowledge, agency, dignity, creativity, participation, and capacity to contribute meaningfully?

Or does it narrow people into compliance, consumption, dependency, surveillance, or exhaustion?

### *J. De-Implementation Trigger*

If the process is found to generate life-loss, can it be redesigned?

If not, should it be phased out, prohibited, defunded, or replaced?

## C.4 Scoring Guide

Each domain may be scored from –2 to +2.

<b>Score</b>	<b>Interpretation</b>
+2	Strongly life-efficient: increases life goods while reducing ecological burden, material throughput, and human depletion.
+1	Partially life-efficient: produces life goods with some remaining burdens requiring redesign.
0	Mixed or uncertain: benefits and harms unclear; further evidence required.
–1	Life-incoherent risk: produces some benefits but shifts significant burden or causes avoidable harm.
–2	False efficiency: appears efficient only by reducing life-capacity, ecological integrity, care, time, or future viability.

A project or policy should not be classified as life-efficient if it scores negatively on ecological thresholds, burden displacement, or human development, even if it performs well on cost or output measures.

---

## C.5 Summary Matrix

<b>Efficiency Domain</b>	<b>Core Question</b>	<b>Life-Coherent Signal</b>	<b>False Efficiency Signal</b>
Ecological efficiency	Does it secure life goods with less ecological harm?	Lower absolute ecological burden within thresholds	“Greener” growth that still breaches limits
Physical input-output efficiency	Does it secure life goods with less material, energy, space, and time burden?	Sufficiency, durability, repairability, simplicity	Hidden complexity, waste, unpaid labor, time burden
Human development efficiency	Does it expand life-capacity?	More dignity, agency, health, care, creativity, participation	Burnout, precarity, humiliation, dependency
Repair efficiency	Does it strengthen recovery and regeneration?	More sleep, care, ecological restoration, institutional redress	Chronic exposure without repair
Margin efficiency	Does it protect buffers?	More reserve, resilience, trust, public capacity	Lean fragility and crisis-prone systems
Commons efficiency	Does it strengthen shared life-support systems?	Public goods and civil commons expand	Privatization, enclosure, exclusion
Burden efficiency	Are costs fairly borne and reduced?	Costs internalized and equitably shared	Burdens shifted to the vulnerable or future

---

## C.6 Examples of Life-Coherent and False Efficiency

### *Healthcare*

#### **False efficiency:**

Shorter hospital stays that shift complex care onto exhausted families without home support.

#### **Life-coherent efficiency:**

Integrated primary care, prevention, home support, continuity, and community care that reduce hospital burden while improving healing, dignity, and repair.

---

### *Education*

#### **False efficiency:**

Larger class sizes, standardized testing, and digital platforms that lower cost but increase stress, exclusion, and loss of curiosity.

**Life-coherent efficiency:**

Learning environments that expand literacy, imagination, ecological understanding, emotional development, play, participation, and practical capability with less anxiety and exclusion.

---

*Food Systems***False efficiency:**

Cheap ultra-processed food that lowers market price while increasing chronic disease, ecological damage, and cultural loss.

**Life-coherent efficiency:**

Food systems that nourish people, regenerate soil, protect water, support local livelihoods, and reduce disease burden.

---

*Digital Governance***False efficiency:**

Automated welfare or health systems that reduce staff costs while excluding elderly, poor, disabled, or digitally disconnected users.

**Life-coherent efficiency:**

Digital tools that reduce administrative burden, preserve human support, protect privacy, improve access, and allow contestation.

---

*Tourism***False efficiency:**

High visitor throughput that raises GDP while degrading reefs, water systems, housing access, local culture, and ecological resilience.

**Life-coherent efficiency:**

Regenerative tourism that protects ecosystems, strengthens local livelihoods, respects culture, funds commons, and preserves community margins.

---

*Climate Adaptation***False efficiency:**

Adaptation projects that protect high-value assets while leaving vulnerable communities exposed.

**Life-coherent efficiency:**

Community-led adaptation that protects homes, water, food systems, mangroves, reefs, public health, and social trust.

---

## C.7 Policy Use

The Life-Coherent Efficiency Module can be used in national development planning, budget review, public investment appraisal, health-system reform, education policy, climate adaptation and mitigation, tourism planning, digital transformation, infrastructure development, food-system reform, labor policy, and institutional redesign.

For each policy proposal, decision-makers should ask:

**Is this efficient only for the institution, market, or budget — or is it efficient for life?**

---

## C.8 Closing Principle

The Life-Coherent Efficiency Module rests on one principle:

**No process is truly efficient if it increases output, profit, speed, or administrative performance by reducing life-capacity, enclosing commons, displacing burden, or breaching life-ground thresholds.**

Real efficiency is the art of enabling more life with less life-loss.

## Appendix D — Positive Peace and Life-Capacity Indicators

### Purpose

The Positive Peace and Life-Capacity Indicators expand the peace dimension of Beyond GDP beyond the narrow measurement of conflict-related deaths.

The UN Beyond GDP framework rightly includes peace as a foundational principle. This is necessary, but incomplete if peace is operationalized primarily through the absence of armed conflict or direct lethal violence. A society may have few conflict-related deaths and still be organized through structural, cultural, ecological, commercial, institutional, or digitally mediated forms of avoidable harm.

This appendix proposes a broader peace module grounded in Galtung's distinction between negative and positive peace and deepened through the life-coherent framework.

The core proposition is:

**Peace is not merely the absence of direct violence. Peace is the active presence of life-enabling conditions and the reduction of avoidable life-harm.**

---

### D.1 The Core Peace Question

For any society, policy, institution, or development pathway, ask:

**Are avoidable conditions that injure, constrain, degrade, or prevent life-capacity being reduced, repaired, and transformed?**

This question reframes peace as a cross-cutting condition of progress.

Peace is present when people, communities, ecosystems, and future generations are protected from preventable harm and supported in their capacity to live, heal, participate, repair, and flourish.

Peace is absent when systems normalize preventable harm, even without declared war.

---

### D.2 Negative Peace Indicators

Negative peace indicators remain essential. They capture direct violence, physical insecurity, and overt harm.

### *Suggested indicators*

Conflict-related deaths per 100,000 population  
Intentional homicides per 100,000 population  
Non-fatal assault rates  
Intimate-partner violence prevalence  
Child abuse and neglect prevalence  
Elder abuse prevalence  
Sexual violence prevalence  
Hate crimes or identity-based violence  
Human trafficking cases  
Perceived safety walking alone after dark  
Armed conflict displacement  
Refugee and internally displaced population rates

### *Interpretation*

These indicators answer:

#### **Are people protected from direct bodily harm and physical insecurity?**

They are necessary because direct violence destroys life-capacity immediately and visibly.

But they do not capture all conditions of peace. For a life-coherent framework, negative peace indicators must be nested within a wider positive peace architecture.

---

## D.3 Structural Life-Security Indicators

Structural life-security indicators measure whether people have secure access to the basic conditions of life.

### *Suggested indicators*

Food security  
Water security  
Safe sanitation access  
Housing security  
Energy access  
Healthcare access  
Primary care coverage  
Essential medicines access  
Income sufficiency  
Living wage coverage  
Social protection coverage

Safe transport access  
Childcare access  
Elder care access  
Disability support access  
Legal identity and documentation access  
Disaster protection coverage

### *Interpretation*

These indicators answer:

### **Are basic life necessities securely available, or are people exposed to preventable deprivation?**

Structural harm appears when avoidable arrangements deny people the conditions needed to live with dignity.

A society with low conflict deaths but high food insecurity, homelessness, unsafe water, or inaccessible healthcare cannot be considered fully peaceful.

---

## D.4 Institutional Peace Indicators

Institutional peace indicators measure whether institutions protect, dignify, repair, and remain answerable to those affected.

### *Suggested indicators*

Access to justice  
Legal aid availability  
Administrative burden index  
Average time to access essential public services  
Public-service denial or appeal rates  
Grievance redress availability  
Institutional complaint resolution time  
Procedural fairness measures  
Perceived dignity in public-service encounters  
Corruption perception and experience  
Rights enforcement indicators  
Public trust and institutional trustworthiness  
Participation in public decision-making  
Protection for whistleblowers and human-rights defenders  
Independent oversight mechanisms  
Institutional repair after harm

## *Interpretation*

These indicators answer:

**Do institutions reduce harm and protect life-capacity, or do they impose burden, humiliation, exclusion, and delay?**

The distinction between trust and trustworthiness is crucial.

A life-coherent framework does not ask only whether people trust institutions. It asks whether institutions deserve trust.

---

## D.5 Cultural Dignity Indicators

Cultural dignity indicators measure whether social meanings, narratives, norms, and identities support legitimate coexistence or normalize life-capacity reduction.

### *Suggested indicators*

Reported discrimination or harassment  
Gender equality measures  
Racial, ethnic, religious, caste, or Indigenous inclusion indicators  
Disability inclusion indicators  
Cultural safety in health, education, and public services  
Language access in public systems  
Representation in decision-making bodies  
Freedom of expression  
Media pluralism  
Protection of cultural heritage  
Civic space indicators  
Social inclusion and belonging  
Intergroup trust  
Public attitudes toward marginalized groups  
Humiliation, stigma, or exclusion experience measures

## *Interpretation*

These indicators answer:

**Are persons and communities recognized as legitimate participants in social life, or are they degraded, silenced, excluded, or misnamed?**

Cultural harm does not always appear as physical injury. It appears when stories and norms make preventable suffering seem acceptable, deserved, necessary, or invisible.

---

## D.6 Ecological Peace Indicators

Ecological peace indicators measure whether the life-ground is being protected from degradation that reduces present and future life-capacity.

### *Suggested indicators*

Air pollution exposure  
Safe drinking water quality  
Watershed health  
Soil health  
Biodiversity intactness  
Protected ecosystem coverage  
Reef health  
Mangrove and wetland coverage  
Deforestation rate  
Land degradation  
Climate vulnerability  
Heat exposure  
Flood and storm-surge exposure  
Sea-level rise risk  
Toxic exposure burden  
Waste management quality  
Access to green and blue spaces  
Ecological restoration investment  
Community dependence on threatened ecosystems

### *Interpretation*

These indicators answer:

**Are ecological systems supporting life, or are they being degraded in ways that impose harm on bodies, communities, species, and future generations?**

Ecologically mediated harm occurs when the life-ground is damaged and burdens are displaced onto those who did not create the harm.

For small islands, coastal communities, and climate-vulnerable regions, ecological peace is foundational.

---

## D.7 Commercial Determinants of Peace and Harm

Commercial peace indicators measure whether market systems support life goods or profit from life-capacity reduction.

### *Suggested indicators*

Exposure to harmful commodity marketing  
Ultra-processed food availability and consumption  
Predatory lending prevalence  
Household debt distress  
Corporate political influence indicators  
Lobbying transparency  
Fossil-fuel subsidy levels  
Public-health regulatory strength  
Labor exploitation indicators  
Wage theft or unpaid labor complaints  
Occupational injury and illness rates  
Supply-chain labor standards  
Marketing to children  
Food environment healthfulness  
Commercial determinants of chronic disease burden

### *Interpretation*

These indicators answer:

**Are commercial systems provisioning life goods, or are they profiting from exposure, dependency, illness, insecurity, and ecological harm?**

Commercially mediated harm may be legal and profitable while remaining life-reducing.

A life-coherent framework therefore asks whether markets are subordinated to life goods or whether life is subordinated to markets.

---

## D.8 Digital and Algorithmic Peace Indicators

Digital and algorithmic peace indicators measure whether digital systems expand agency, participation, knowledge, and care, or produce manipulation, exclusion, surveillance, and loss of autonomy.

### *Suggested indicators*

Digital access and affordability  
Digital literacy  
Algorithmic accountability mechanisms  
Automated decision appeal rights  
Algorithmic discrimination cases  
Data privacy protections  
Surveillance intensity  
Cyberbullying prevalence  
Online harassment  
Misinformation exposure  
Attention-capture risk indicators  
Screen-related sleep disruption  
Platform transparency  
Use of dark patterns  
Digital exclusion in public services  
Human support availability in digital systems  
Public-interest digital infrastructure availability

### *Interpretation*

These indicators answer:

**Do digital systems support legitimate coexistence, agency, knowledge, and access, or do they reduce life-capacity through exclusion, manipulation, surveillance, and attention capture?**

Digitally mediated harm is often hidden behind technical language. A life-coherent peace framework makes it visible without assuming that all digital systems are harmful. The question is whether digital systems remain answerable to life.

---

## D.9 Repair and Reconciliation Indicators

Positive peace is not only the absence of harm. It requires the presence of repair.

### *Suggested indicators*

Access to mental-health care  
Trauma-informed services  
Restorative justice availability  
Community mediation mechanisms  
Conflict-resolution services  
Institutional apology and redress mechanisms

Victim support services  
Ecological restoration programs  
Post-disaster recovery time  
Public-health recovery capacity  
Caregiver support services  
Social support network strength  
Community healing programs  
Cultural restoration initiatives  
Truth and reconciliation processes where relevant  
Youth participation in repair-oriented civic action

### *Interpretation*

These indicators answer:

### **When harm occurs, are there pathways for healing, repair, justice, restoration, and learning?**

A society without repair capacity cannot sustain peace. Harm accumulates, trust erodes, and wounds become structural.

---

## D.10 Margin Protection Indicators

Peace depends on margins. Systems without margins become brittle, fearful, and conflict-prone.

### *Suggested indicators*

Household savings or emergency buffer  
Income volatility  
Time poverty  
Sleep sufficiency  
Caregiver burden  
Public-health surge capacity  
Health workforce reserve  
Teacher workload and burnout  
Public-service staffing adequacy  
Disaster preparedness capacity  
Food reserve and supply resilience  
Water reserve capacity  
Energy resilience  
Social trust  
Civic participation  
Ecosystem buffer indicators, such as mangroves, wetlands, forests, reefs  
Democratic space and freedom of association

## *Interpretation*

These indicators answer:

**Do people, communities, institutions, and ecosystems have enough reserve to absorb disturbance without collapse?**

Margins are often misread as inefficiency. In life-coherent peace, they are conditions of stability, repair, and freedom.

---

## D.11 Burden-Displacement Indicators

Peace cannot be assessed only within national borders. A society may appear peaceful while displacing harm elsewhere.

### *Suggested indicators*

Imported carbon footprint  
Material footprint  
Waste exports  
Supply-chain labor violations  
Overseas ecological impacts  
Climate responsibility relative to vulnerability  
Debt-service burden imposed on life goods  
Migration pressures linked to ecological or economic harm  
Tax avoidance and illicit financial flows  
Military exports and arms trade exposure  
Extractive investment impacts  
Health-worker migration effects on source countries  
Tourism leakage and local burden  
Food import dependency and external land use

### *Interpretation*

These indicators answer:

**Is one group's peace being purchased by another group's exposure, depletion, or future loss?**

Burden displacement is one of the central ways false peace is maintained.

A life-coherent framework insists that peace must include the unseen, distant, and future-bearing.

## D.12 Summary Matrix

<b>Peace Domain</b>	<b>Core Question</b>	<b>Life-Coherent Signal</b>	<b>Warning Signal</b>
Negative peace	Are people safe from direct violence?	Low conflict, homicide, and abuse rates	War, homicide, gendered violence, fear
Structural life security	Are life necessities secured?	Food, water, housing, care, health access	Deprivation, homelessness, preventable disease
Institutional peace	Do institutions protect and repair?	Trustworthy, accessible, dignified services	Burden, corruption, humiliation, denial
Cultural dignity	Are all recognized as legitimate?	Inclusion, cultural safety, voice	Discrimination, stigma, silencing
Ecological peace	Is the life-ground protected?	Clean air, water, ecosystem health	Pollution, climate risk, ecological loss
Commercial peace	Do markets serve life goods?	Life-enabling provisioning	Harmful commodities, debt, extraction
Digital peace	Do technologies expand agency?	Access, accountability, privacy, contestability	Surveillance, bias, manipulation
Repair	Can harm be healed?	Redress, restoration, trauma care, reconciliation	Unrepaired harm, mistrust, abandonment
Margins	Is there reserve for disturbance?	Time, trust, care, ecological buffers	Fragility, burnout, crisis-proneness
Spillovers	Is peace achieved without displaced harm?	Responsibility across borders and generations	Exported risk, debt, waste, emissions

## D.13 Policy Use

The Positive Peace and Life-Capacity Indicators may be used to:

- expand Beyond GDP peace measurement;
- assess national development plans;
- evaluate public safety beyond policing and conflict;
- integrate peace with public health, climate, housing, food, and care systems;
- detect structural harm;
- support restorative governance;
- monitor ecological and commercial determinants of harm;
- evaluate digital systems;
- and identify where resilience language is masking preventable harm.

For any policy proposal, the key question is:

**Does this policy reduce avoidable life-harm and strengthen the conditions of legitimate coexistence?**

---

## D.14 Closing Principle

Peace is not the quiet produced by suppressed conflict.

Peace is the living condition in which persons, communities, ecosystems, and future generations are not forced to carry preventable harm.

The life-coherent peace principle is:

**No society is truly peaceful while avoidable life-harm remains normalized, displaced, profitable, invisible, or unrepaired.**

## Appendix E — The Life-Coherence Test for Beyond GDP Indicators

### Purpose

The Life-Coherence Test is a practical tool for evaluating whether any Beyond GDP indicator helps reveal, protect, and expand life-capacity.

It is designed to prevent indicator systems from becoming performative, reductive, or captured. A dashboard may include many useful indicators and still fail if those indicators conceal root causes, ignore burden displacement, normalize preventable harm, or do not lead to life-enabling action.

The test asks whether each indicator remains answerable to life.

The core proposition is:

**An indicator is life-coherent only if it helps reveal whether life-capacity is being enabled or reduced, and if it supports action to reduce harm, restore repair, protect margins, strengthen commons, and regenerate life capital.**

---

### E.1 The Core Indicator Question

For any Beyond GDP indicator, ask:

**Does this indicator help us understand whether persons, communities, ecosystems, and future generations are more able to live, heal, participate, repair, and flourish?**

If the answer is yes, the indicator is life-relevant.

If the answer is unclear, the indicator requires refinement or complementary interpretation.

If the answer is no, the indicator may be administratively useful but should not be treated as a core measure of life-coherent progress.

---

### E.2 The Ten Life-Coherence Tests

#### *1. The Life-Capacity Test*

**Question:**

Does the indicator reveal whether life-capacity is expanding or contracting?

**Look for:**

health, dignity, agency, belonging, knowledge, care, participation, repair, creativity, ecological security, and future possibility.

**Warning sign:**

The indicator measures system activity without showing whether life is actually enabled.

**Example:**

Employment rate alone is incomplete. It must be interpreted with wage sufficiency, safety, time poverty, dignity, autonomy, and care compatibility.

---

## *2. The Life-Good Test*

**Question:**

Does the indicator show whether universal life necessities are being secured?

**Life goods include:**

air, water, food, shelter, sanitation, sleep, care, healthcare, education, safety, ecological surroundings, meaningful work, public knowledge, culture, play, and self-governing choice.

**Warning sign:**

The indicator measures access, consumption, or service use without showing sufficiency, reliability, dignity, quality, or ecological sustainability.

**Example:**

Water access is incomplete unless it captures safety, affordability, reliability, trust, and protection of the watershed from which water is drawn.

---

## *3. The Sufficiency Test*

**Question:**

Does the indicator identify whether people have enough of what is required for life, not merely whether averages are improving?

**Look for:**

thresholds, minimum standards, floors, adequacy, sufficiency, and secure access.

**Warning sign:**

Average improvement hides deprivation among vulnerable groups.

**Example:**

Average household income may rise while many households remain below the level required for housing, food, transport, care, education, and health.

---

#### 4. *The Distribution and Burden Test*

**Question:**

Can the indicator be disaggregated by who benefits and who bears the burden?

**Look for disaggregation by:**

income, gender, age, race, ethnicity, disability, geography, migration status, occupation, household structure, ecological vulnerability, and exposure burden.

**Warning sign:**

The indicator reports national progress while concealing unequal exposure, unequal repair, or unequal margins.

**Example:**

Air quality averages may improve while specific communities remain exposed to industrial pollution, traffic emissions, wildfire smoke, dust, or toxic sites.

---

#### 5. *The Exposure–Repair–Margins Test*

**Question:**

Does the indicator help reveal exposure burden, repair capacity, or margin depletion?

**Look for:**

stressors, toxic exposures, food insecurity, housing insecurity, institutional burden, care burden, sleep loss, public-health reserve, ecological buffers, household financial margins, and social support.

**Warning sign:**

The indicator reports outcomes but not the generative conditions producing them.

**Example:**

Life expectancy decline should trigger questions about food systems, work stress, violence, healthcare access, loneliness, ecological exposure, repair failure, and margin depletion.

---

#### 6. *The Civil Commons Test*

**Question:**

Does the indicator reveal whether shared life-support systems are being protected, restored, or enclosed?

**Civil commons include:**

public health, education, water systems, care systems, ecological protections, public knowledge,

libraries, parks, legal aid, social protection, sanitation, public-interest digital infrastructure, and accountable governance.

**Warning sign:**

The indicator treats life necessities as private consumption rather than shared conditions of life.

**Example:**

Healthcare access should be assessed not only by service availability, but by whether care is universal, dignified, affordable, continuous, culturally safe, and publicly accountable.

---

*7. The Life-Capital Test*

**Question:**

Does the indicator distinguish life capital from life-incoherent capital?

**Life capital:**

secures life goods, expands life-capacity, regenerates through time, strengthens commons, and avoids burden displacement.

**Life-incoherent capital:**

grows by degrading bodies, ecosystems, care, attention, institutions, or future viability.

**Warning sign:**

The indicator counts capital accumulation without asking whether life-capacity is expanding or being reduced.

**Example:**

Produced capital may increase through luxury real estate while shelter access worsens.

---

*8. The Positive Peace Test*

**Question:**

Does the indicator reveal avoidable life-harm, including direct, structural, cultural, ecological, institutional, commercial, or digitally mediated forms of harm?

**Warning sign:**

Peace is reduced to conflict deaths, while chronic deprivation, humiliation, exposure, exclusion, ecological damage, and institutional burden remain unmeasured.

**Example:**

A country may have low conflict-related deaths but high food insecurity, gendered violence, ecological exposure, unsafe work, or institutional exclusion.

---

## 9. The Capture Test

**Question:**

Could this indicator be gamed, narrowed, manipulated, or used performatively?

**Look for risks of:**

metric capture, measurement harm, commercial capture, epistemic capture, algorithmic capture, cultural masking, burden displacement, and resilience-as-adaptation.

**Warning sign:**

Institutions improve the metric while worsening lived reality.

**Example:**

Public-service satisfaction scores may improve because only successful users are surveyed, while those excluded by digital systems, language barriers, cost, fear, or bureaucracy remain invisible.

---

## 10. The Actionability and De-Implementation Test

**Question:**

Does the indicator point toward life-enabling action, including what must be stopped, restored, redesigned, protected, or learned?

**Warning sign:**

The indicator reports harm without triggering responsibility.

**Example:**

If an indicator shows rising child obesity, life-coherent action should not stop at individual education. It should examine food environments, marketing to children, school meals, poverty, urban design, sleep, stress, and commercial determinants.

---

## E.3 Indicator Interpretation Template

For each indicator, the following template may be used.

*Indicator Name*

State the indicator clearly.

*What it reveals*

What life condition does the indicator make visible?

*What it may conceal*

What exposures, burdens, exclusions, repair failures, or structural causes may remain hidden?

*Life-capacity relevance*

Which life-capacities does the indicator relate to?

*Life goods involved*

Which universal life necessities are implicated?

*Distribution and burden*

Who benefits, who is excluded, and who bears the burden?

*Repair and margins*

Does the indicator reveal whether repair capacity and margins are present?

*Commons relevance*

Does it reveal the strength or weakness of civil commons?

*Capital relevance*

Does it distinguish life capital from life-incoherent capital?

*Peace relevance*

Does it reveal direct, structural, cultural, ecological, commercial, institutional, or digitally mediated harm?

*Capture risk*

How might the indicator be gamed, narrowed, or used performatively?

*Required action*

What should be recognized, renamed, measured further, exposed, de-implemented, restored, redesigned, protected, coordinated, or learned?

## E.4 Worked Examples

### *Example 1: Household Disposable Income per Capita*

**What it reveals:**

Material resources available to households.

**What it may conceal:**

Cost of living, debt, unpaid care burden, housing insecurity, time poverty, wealth inequality, ecological exposure, and unequal access to public goods.

**Life-capacity relevance:**

Income can support food, shelter, care, transport, health, education, and participation, but only if sufficient, secure, and not offset by high burden.

**Life-coherent interpretation:**

Income should be interpreted with sufficiency thresholds, cost of necessities, access to civil commons, household debt, household composition, time burden, and distribution.

---

### *Example 2: Employment or Labor Underutilization*

**What it reveals:**

Participation in paid work and availability of labor opportunities.

**What it may conceal:**

Low wages, unsafe work, precarious scheduling, overwork, underemployment, unpaid care conflict, algorithmic management, occupational exposure, and meaningless or harmful work.

**Life-capacity relevance:**

Work can support dignity, livelihood, skill, meaning, belonging, and contribution, but can also reduce life-capacity through exhaustion, insecurity, injury, or humiliation.

**Life-coherent interpretation:**

Work indicators should be paired with living wage, time sovereignty, care compatibility, occupational health, autonomy, dignity, and meaningful contribution.

---

### *Example 3: Life Satisfaction*

**What it reveals:**

Subjective evaluation of life.

**What it may conceal:**

Adaptation to deprivation, cultural expectations, resignation, fear of expressing dissatisfaction, constrained aspiration, ecological grief, and unequal possibility.

**Life-capacity relevance:**

Subjective well-being matters, but must be interpreted alongside objective conditions, dignity, agency, belonging, future possibility, and repair capacity.

**Life-coherent interpretation:**

Life satisfaction should be read with care. It should not be used to justify low life goods where expectations have been lowered by structural deprivation.

---

*Example 4: Biodiversity Intactness***What it reveals:**

Ecological condition and pressure on biodiversity.

**What it may conceal:**

Local ecological relationships, cultural meaning, species loss not captured by aggregate measures, community dependence, and threshold effects.

**Life-capacity relevance:**

Biodiversity supports food systems, climate regulation, water cycles, disease regulation, cultural life, and the intrinsic flourishing of the living world.

**Life-coherent interpretation:**

Biodiversity indicators should function as life-ground threshold indicators, not merely environmental assets within a substitutable capital framework.

---

*Example 5: Public-Service Satisfaction***What it reveals:**

Reported user experience with public services.

**What it may conceal:**

Exclusion before access, administrative burden, digital exclusion, humiliation, corruption, fear, appeal barriers, and low expectations.

**Life-capacity relevance:**

Public services are civil commons when they secure life goods with dignity and fairness.

**Life-coherent interpretation:**

Satisfaction should be paired with access, denial rates, administrative burden, procedural fairness, grievance redress, cultural safety, and institutional trustworthiness.

**E.5 Scoring Guide**

Each indicator may be assessed using a simple score.

<b>Score</b>	<b>Interpretation</b>
+2	Strongly life-coherent: reveals life-capacity, life goods, distribution, repair, margins, commons, and action needs.
+1	Moderately life-coherent: useful but requires complementary indicators or interpretation.
0	Ambiguous: relevance unclear or highly context-dependent.
-1	Life-incoherent risk: may conceal burden, enable capture, or distort action.
-2	Life-incoherent: likely to mislead, legitimize harm, or measure system performance while ignoring life-capacity.

No single indicator should be expected to do everything. The purpose is to assess whether the indicator contributes meaningfully to the wider life-coherent dashboard.

**E.6 Life-Coherence Review Matrix**

<b>Test</b>	<b>Key Question</b>	<b>Strong Signal</b>	<b>Warning Signal</b>
Life-capacity	Does it show whether life can be lived more fully?	Reveals agency, dignity, repair, participation	Measures activity without life relevance
Life goods	Does it show access to necessities?	Tracks secure access to means of life	Tracks consumption only
Sufficiency	Does it identify enough?	Uses thresholds and minimum standards	Relies on averages
Distribution	Who benefits and who bears burden?	Disaggregated by relevant axes	National average hides harm
Exposure–repair–margins	Does it reveal generative conditions?	Shows exposure, repair, reserve	Reports outcomes only
Civil commons	Does it reveal shared life-support systems?	Tracks public access and commons strength	Privatized access invisible
Life capital	Does it distinguish life capital from life-incoherent capital?	Shows regeneration through time	Treats all accumulation as good
Positive peace	Does it reveal avoidable harm?	Captures structural and cultural conditions	Focuses only on direct harm

Capture	Can it be gamed?	Contestable and transparent	Optimizable without real change
Actionability	Does it lead to transformation?	Points to repair and de-implementation	Reports harm without responsibility

### E.7 Policy Use

The Life-Coherence Test can be used by national statistical offices, ministries of planning and finance, public-health agencies, environmental agencies, local governments, civil society organizations, academic researchers, community groups, international organizations, and independent accountability bodies.

It may be applied when selecting Beyond GDP indicators, reviewing national progress dashboards, evaluating policy proposals, designing public budgets, assessing development projects, reviewing digital systems, conducting environmental impact assessments, and auditing institutional performance.

For every indicator, the key question is:

**Does this measure help reveal and transform the conditions through which life-capacity is enabled or reduced?**

### E.8 Closing Principle

The Life-Coherence Test rests on one principle:

**No indicator is adequate simply because it is measurable, comparable, or institutionally convenient. It is adequate only to the extent that it helps reveal and transform the conditions through which life-capacity is enabled or reduced.**

A Beyond GDP dashboard becomes life-coherent when every indicator remains answerable to life.

## Appendix F — The Life-Coherent Action Cycle

### Purpose

The Life-Coherent Action Cycle translates the white paper’s conceptual framework into a practical sequence for policy, institutional reform, community dialogue, public-health planning, economic redesign, environmental governance, and Beyond GDP implementation.

It is designed to ensure that measurement leads to transformation rather than performance reporting.

The cycle builds on the action method developed in the life-coherent health framework: **recognize, rename, measure, expose, de-implement, restore commons, redesign affordances, protect margins, coordinate, monitor, and learn.**

The core proposition is:

**A society becomes life-coherent not by measuring more alone, but by transforming the relations that enable or reduce life-capacity.**

---

### F.1 The Full Cycle

The Life-Coherent Action Cycle consists of ten recurring movements:

1. Recognize
2. Rename
3. Measure
4. Expose
5. De-implement
6. Restore commons
7. Redesign affordances
8. Protect margins
9. Coordinate
10. Monitor and learn

These steps are not rigidly linear. They form a living cycle. Each movement deepens the others. Recognition improves naming. Naming improves measurement. Measurement enables exposure. Exposure reveals what must be stopped. De-implementation opens space for restoration. Commons restoration supports better affordances. Better affordances protect margins. Margins enable coordination. Coordination requires learning. Learning renews recognition.

The cycle may be used at multiple scales: a national development plan, a local government strategy, a health-system reform, a school redesign, a climate adaptation project, a public budget,

a digital transformation, a tourism policy, a food-system intervention, or a community repair process.

---

## F.2 Step 1: Recognize

### *Core question*

#### **What is suffering, degrading, disappearing, being overloaded, or being forced to adapt to preventable harm?**

Recognition is the first condition of transformation. What remains invisible cannot be repaired. GDP failed as a compass because it recognized monetized activity while leaving many forms of life-loss outside the field of concern. Beyond GDP begins to widen recognition by measuring well-being, equity, sustainability, and resilience.

Life-coherent recognition asks what is still unseen.

### *What to recognize*

- Care depletion
- Time poverty
- Ecological grief
- Institutional humiliation
- Administrative burden
- Digital exclusion
- Attention capture
- Unsafe work
- Food-system harm
- Housing insecurity
- Commercial manipulation
- Blocked repair
- Margin depletion
- Burden displacement
- Commons enclosure
- Loss of future possibility

### *Practical use*

Before selecting indicators or designing interventions, convene those affected and ask:

What is being endured that should not be normalized?

What harms are treated as private troubles but are actually public conditions?

What signals of breakdown are being ignored?

What life-capacities are being quietly reduced?  
Who has been absent from the official description of the problem?

Recognition turns invisible suffering into shared responsibility.

---

### F.3 Step 2: Rename

#### *Core question*

**What has been misnamed as growth, development, efficiency, resilience, innovation, consumer choice, or progress when it is actually reducing life-capacity?**

Misnaming protects harmful systems. It allows extraction to appear as development, abandonment to appear as resilience, burden shifting to appear as efficiency, and market dependency to appear as freedom.

#### *Common renamings*

“Externalities” become **displaced harms**.

“Human resources” become **persons with life-capacity**.

“Natural resources” become **life-ground**.

“Consumer choice” becomes **commercially structured desire** where manipulation is present.

“Resilience” becomes **adaptation to preventable harm** when root causes are left intact.

“Efficiency” becomes **false efficiency** where costs are shifted onto life.

“Growth” becomes **ambiguous expansion** unless it secures life goods.

“Capital” becomes **life capital or life-incoherent capital** depending on life consequences.

#### *Practical use*

For each policy area, identify terms that conceal harm. Replace them with language that reveals organism–niche relations, life goods, burdens, and responsibilities.

Renaming is not rhetorical decoration. It is epistemic repair. It changes what can be seen, contested, funded, regulated, repaired, or stopped.

---

### F.4 Step 3: Measure

#### *Core question*

**What must be measured to reveal whether life-capacity is being enabled or reduced?**

Measurement becomes life-coherent when it serves life rather than institutional convenience. It should reveal not only outcomes, but also the generative conditions producing those outcomes.

### *What to measure*

Life goods  
Life-capacity  
Exposure burden  
Repair capacity  
Restorative margins  
Civil commons strength  
Life capital and life-incoherent capital  
Positive peace  
Institutional trustworthiness  
Ecological thresholds  
Commercial determinants of harm  
Digital and algorithmic harms  
Burden displacement  
Intergenerational viability

### *Practical use*

Apply the Life-Coherence Test from Appendix E to every indicator. Ask whether the indicator reveals life, conceals life, or distorts action.

Measurement should answer:

What life condition is being made visible?  
What remains hidden?  
Who benefits from this measure?  
Who may be burdened by it?  
What action should follow?

Measurement should not become an end in itself. It should clarify what life needs and whether those needs are being secured.

---

## F.5 Step 4: Expose

### *Core question*

**Who benefits, who bears the burden, what is hidden, and where is harm displaced?**

Exposure reveals the hidden architecture of life-loss. Many systems appear successful because their costs are shifted elsewhere.

### *What to expose*

Hidden beneficiaries  
Hidden burdens  
Ecological costs  
Unpaid labor  
Care burden  
Worker depletion  
Community displacement  
Future risks  
Commercial influence  
Regulatory capture  
Algorithmic exclusion  
Unequal exposure  
Life-incoherent capital  
Life-loss behind growth

### *Practical use*

For every major policy, investment, or institutional reform, conduct a burden-displacement analysis:

Who gains?  
Who pays?  
Who is not counted?  
Who must adapt?  
Who loses time, health, land, water, culture, care, or future possibility?  
Which harms are being exported across class, geography, gender, species, borders, or generations?

Exposure is not blame for its own sake. It is the precondition for justice and repair.

---

## F.6 Step 5: De-Implement

### *Core question*

**What must be stopped, phased out, defunded, prohibited, or fundamentally redesigned because it reduces life-capacity?**

Transformation requires more than adding new programs. Some practices should end.

### *Candidates for de-implementation*

Harmful subsidies  
Life-reducing commodities  
Predatory lending  
Ecologically destructive infrastructure  
Humiliating administrative procedures  
Low-value or harmful care  
Dark-pattern digital design  
Policies that shift care burden onto families  
Development models that degrade life-ground  
Metrics that incentivize harmful behavior  
Institutional routines that normalize exclusion

### *Practical use*

Create a “stop-doing list” for each sector. A Beyond GDP dashboard should not only report harms; it should trigger review of the policies and practices producing them.

For each harmful practice, ask:

Can it be redesigned?  
Can it be regulated?  
Can it be replaced?  
Can it be phased out?  
What transition support is needed for those dependent on it?  
Who benefits from its continuation?  
Who bears the cost of delay?

De-implementation is the test of seriousness. A society that measures harm but refuses to stop producing it remains performative.

---

## F.7 Step 6: Restore Commons

### *Core question*

**What shared life-support systems must be protected, repaired, expanded, or brought back into public responsibility?**

Life-capacity depends on civil commons: shared systems that secure access to life goods.

### *Commons to restore*

Clean water systems  
Public health  
Primary care  
Public education  
Care infrastructure  
Public knowledge  
Libraries  
Parks and public space  
Sanitation  
Legal aid  
Social protection  
Ecological protections  
Watersheds  
Mangroves, reefs, forests, and wetlands  
Public-interest digital systems  
Community food systems

### *Practical use*

For each life necessity, ask:

Is access secure?  
Is access dignified?  
Is access equitable?  
Is access reliable?  
Is access dependent on private purchasing power?  
Is the commons being strengthened or enclosed?  
Who governs it?  
Who can contest its failure?

Commons restoration does not eliminate private initiative. It ensures that private initiative remains nested within protected conditions of life.

---

## *F.8 Step 7: Redesign Affordances*

### *Core question*

**How can the surrounding niche be redesigned so that life-enabling action becomes easier, safer, more dignified, and more repeatable?**

People act within fields of possibility. A life-coherent framework redesigns environments rather than blaming individuals for predictable responses to harmful conditions.

### *Affordances to redesign*

Healthy food environments  
Walkable and safe communities  
Accessible public transport  
Sleep-protecting work schedules  
Care-compatible workplaces  
Dignified health access  
Low-burden public services  
Green and blue spaces  
Participatory schools  
Privacy-respecting digital tools  
Restorative justice pathways  
Community repair spaces

### *Practical use*

For any desired behavior or outcome, ask:

Does the niche make this possible?

Is the life-enabling choice affordable, safe, accessible, meaningful, and supported?

What must be redesigned so that the healthy or life-supporting path is not the hardest path?

Affordance redesign shifts responsibility from isolated individuals to the conditions that shape real choices.

---

## F.9 Step 8: Protect Margins

### *Core question*

**What reserves of time, care, trust, safety, money, ecological stability, and institutional capacity must be protected so that life can absorb disturbance without collapse?**

Margins are often mistaken for inefficiency. In reality, they are conditions of resilience, freedom, and repair.

### *Margins to protect*

Sleep  
Free time  
Caregiver capacity  
Household financial buffers  
Safe housing  
Social trust

Public-health surge capacity  
Staffing reserves  
Ecological buffers  
Biodiversity  
Water reserves  
Food reserves  
Democratic space  
Institutional legitimacy  
Community networks

### *Practical use*

Before cutting “slack” from a system, ask:

Is this margin actually protecting life?  
Who will absorb the burden if it disappears?  
What crisis will become more likely if this reserve is removed?  
Is this apparent inefficiency actually life capital?

Margin protection distinguishes life-coherent efficiency from false efficiency. False efficiency cuts buffers to improve short-term metrics. Life-coherent efficiency protects buffers to sustain long-term viability.

---

## F.10 Step 9: Coordinate

### *Core question*

**Who must act together across sectors, scales, disciplines, and generations to enable life-capacity?**

Life conditions are interdependent. No single ministry, sector, profession, or metric can secure life-coherence alone.

### *Coordination domains*

Health  
Education  
Housing  
Water  
Food  
Climate  
Labor  
Finance  
Law

Technology  
Culture  
Public safety  
Social protection  
Environment  
Local communities  
Regional bodies  
Future generations

### *Practical use*

Create cross-sector life-coherence councils or working groups organized around life goods rather than bureaucratic silos.

Examples include:

Water security group  
Food and nourishment group  
Care and repair group  
Youth future group  
Ecological margins group  
Digital dignity group  
Housing as life-good group

Each group should ask:

What must we stop?  
What must we restore?  
What must we redesign?  
What must we protect?  
How will we know whether life-capacity is expanding?

Coordination is not merely administrative alignment. It is fidelity to the interdependence of life.

---

## F.11 Step 10: Monitor and Learn

### *Core question*

**Are our actions actually reducing exposure, restoring repair, protecting margins, strengthening commons, and expanding life-capacity?**

Life-coherent governance must remain adaptive. Living systems are complex, and interventions may have unintended consequences.

### *What to monitor*

Indicator trends  
Lived experience  
Community feedback  
Ecological signals  
Institutional burden  
Unintended harms  
Capture risks  
Burden displacement  
Repair outcomes  
Margin recovery  
De-implementation effects

### *Practical use*

Monitoring should not be a compliance ritual. It should be a learning process. When evidence shows harm, the system must be willing to revise, repair, or stop.

Learning requires asking:

What improved?  
What worsened?  
Who benefited?  
Who was burdened?  
What did we fail to see?  
What needs to be renamed?  
What should now be de-implemented?  
What new commons or margins are needed?

A life-coherent system learns not only from success, but from the harms it discovers in itself.

---

## F.12 Cycle Summary Matrix

<b>Step</b>	<b>Guiding Question</b>	<b>Main Function</b>	<b>Life-Coherent Output</b>
Recognize	What is suffering or degrading?	Make harm visible	Shared awareness
Rename	What has been misnamed?	Correct language	Epistemic repair
Measure	What must be known?	Generate life-relevant evidence	Life-coherent indicators
Expose	Who benefits and who bears burden?	Reveal power and displacement	Accountability

De-implement	What must stop?	Remove life-reducing practices	Harm reduction
Restore commons	What shared systems must be rebuilt?	Secure life goods	Civil commons renewal
Redesign affordances	What conditions make life-enabling action easier?	Change the niche	Life-supporting environments
Protect margins	What reserves must be safeguarded?	Prevent brittleness	Resilience and repair
Coordinate	Who must act together?	Align sectors and scales	Integrated action
Monitor and learn	What is working or failing?	Adapt and correct	Living governance

### F.13 Minimal Use Template

For rapid use in policy meetings, community workshops, or institutional review, the following abbreviated template may be used:

1. **Recognize:** What life-capacity is being reduced?
2. **Rename:** What is being misnamed?
3. **Measure:** What evidence do we need?
4. **Expose:** Who benefits and who bears the burden?
5. **De-implement:** What must stop?
6. **Restore:** What commons must be rebuilt?
7. **Redesign:** What affordances must change?
8. **Protect:** What margins must be preserved?
9. **Coordinate:** Who must act together?
10. **Learn:** How will we know and adapt?

### F.14 Closing Principle

The Life-Coherent Action Cycle rests on one principle:

**Measurement becomes transformative only when it leads to the de-implementation of harm, restoration of commons, redesign of affordances, protection of margins, and coordinated repair of the relations through which life is enabled or reduced.**

A Beyond GDP agenda becomes life-coherent when it does not merely count what counts, but helps societies care for, protect, and regenerate what makes life possible.

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## Author Bio

**Dr. Bichara Sahely, BSc (Biology), MBBS, DM (Internal Medicine)** is a physician, systems thinker, and independent scholar whose work integrates clinical medicine, public health, social and ecological determinants of health, life-value onto-axiology, autopoiesis, peace theory, civil commons, planetary health, and life-coherent governance. His recent work develops a life-coherent framework for health, healing, and human flourishing, reframing health as life-capacity enabled, healing as life-capacity restored, and flourishing as life-capacity expressed in dignity, relation, meaning, participation, repair, and ecological belonging. His broader research explores how economies, institutions, technologies, policies, and cultures can be reordered as instruments of life rather than systems before which life must justify itself.

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The author remains fully responsible for the final conceptual framing, interpretive judgments, manuscript content, scholarly claims, and any remaining errors or omissions.

## Back Cover Synopsis

**From Beyond GDP to Life-Coherent Progress** argues that the global movement to complement GDP with broader measures of well-being, equity, sustainability, and resilience is necessary but incomplete. The United Nations Beyond GDP agenda rightly recognizes that economic output cannot serve as the master measure of progress. Yet a wider dashboard can still become performative if it measures harm without transforming the relations that produce harm.

This white paper proposes a life-coherent deepening of the Beyond GDP agenda. Drawing on the UN Beyond GDP framework, John McMurtry's life-value onto-axiology, Johan Galtung's positive peace, and Humberto Maturana's relational biology, it reframes progress as the expansion of life-capacity: the real capacity of persons, communities, ecosystems, and future generations to live, heal, participate, repair, and flourish.

It introduces life capital as the deeper criterion by which produced, human, social, institutional, and natural capital must be judged. It reclaims efficiency as the provision of more life goods with less life-loss. It deepens peace beyond the absence of conflict into the reduction of avoidable life-harm. It reframes governance as the coordination of life-enabling conditions through the legitimate coexistence of all those affected.

The paper's central question is simple:

### **Does this way of living enable life to live?**

The Beyond GDP agenda widens the compass of progress. A life-coherent framework deepens that compass by grounding it in life-value, life capital, positive peace, ecological limits, civil commons, and the practical transformation of the conditions through which life is enabled or reduced.