



## Socio-Economic Welfare Index – SEW-Index

*A methodology to measure the social impact (social benefit) generated by social development projects*

### **Summary**

*This document proposes an integral concept for measuring the social impact created by social projects. The analysis is done through the “Socio-Economic Welfare Index” (SEW-Index) that measures resources under four groups of goods and services: tangibles and intangibles, individual and collective. The combination of these groupings gives four main values (main indicators) that ranks people into a 0 to 100 scale.*

*This methodology provides a means to measure the impact of a project by comparing the values of the SEW-Index before and after the project, making it possible to assess the social benefit.*

*This document is a summary and update of a longer one, which was first published in 2000. Since then the SEW-Index methodology has been successfully applied in many projects in different countries. At the end of this document, a real case is presented, which shows the results obtained by this methodology.*

*The development of the SEWI methodology took place while the author undertook activities as Project Director of the Limmat Foundation (Zurich). Without Limmat Foundation’s support, this methodology could have never been experimented.*

*The author appreciates all comments and suggestions that shall lead to an improvement of any of the issues developed in this essay.*

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## I. Introduction

It becomes more and more urgent—both from the donors and from the institutions for developing cooperation—to have reliable methodologies that can measure the impact (positive or negative) generated by a project or a social program. The Social and Economic Welfare Index methodology presented hereunder, is a suitable instrument for efficiently performing such task because of the following reasons:

1. It is a **simple method and it is easy to apply**, especially if compared with those used by other institutions (United Nations Development Program, World Bank, etc.).
2. It analyzes **all** resources (goods and services)<sup>1</sup> owned by a determined population, without excluding any important component.
3. It uses **objective data** for the appraisal of the different indicators, even for those measuring intangible resources.
4. It groups all the resources of the population analyzed in a **single value** (the level or value of the SEW-Index), which in spite of its diminishing nature, allows a comparison among several population themselves as well as its evolution through time.
5. Unlike other methodologies, the indicators for evaluating impact have not been chosen according to the type of project, but rather to reflect the living conditions of the beneficiaries, which are the ones to be measured in the impact evaluation. This approach ensures a 360° evaluation, as no relevant aspect of the beneficiaries is left unanalyzed.

## II. The Social Benefit

### II.1. Concept of Social Benefit

**The social benefit created by a project is the improvement of the socio-economic welfare level (or living conditions) of the beneficiaries** that can be strictly attributable to the project, and not to other conditions that do not depend on it<sup>2</sup>.

### II.2. The Socio-Economic Welfare Matrix

The socio-economic welfare level—the living conditions of a population—is defined by the set of resources (goods & services) possessed at a given time. All these goods and services belong to one of the four categories:

• Individual	• Tangible
• Collective	• Intangible

The combination of these four kinds of goods and services give us the following matrix, which we define as the **socio-economic welfare matrix**:

<sup>1</sup> In the rest of the text, “resources” refers to the sum of goods and services.

<sup>2</sup> While limiting the social benefit to the direct effects (immediate or mediate) we are excluding the externalities, which are very difficult to predict, and even harder to measure.

<b>Tangible individuals</b> <i>(economic)</i>	<b>Tangible collectives</b> <i>(public)</i>
<b>Intangible individuals</b> <i>(personal)</i>	<b>Intangible collectives</b> <i>(communal)</i>

### III. Socio-Economic Welfare Index (SEW-Index)

#### III.1. Introduction

Given the heterogeneity of the components of the SEW-Index, there is a need to find a common unit of measure to evaluate every element so they can be added together.

A common approach is to reduce all components to an internationally convertible currency unit such as the US Dollar. The advantage of such a unit is that it has a clear and accurate significance. Everybody knows how much 100 dollars represents in relation to his or her own currency. Another advantage is that qualitative parameters can also be measured in terms of their opportunity cost. Nevertheless, such monetary valuations do not account for a lot of goods and values that cannot be reduced to currency units.

#### III.2. Socio-Economic Welfare Index (SEW-Index)

The concept of the SEW-Index comes mainly from the principles underlying the *human development index (HDI)* created by the UNDP to measure the level of development of different countries. The HDI analyzes three dimensional indices: health (life expectancy), education (expected and average years of schooling) and income (gross domestic product per capita in PPP USD<sup>3</sup>). Although the HDI is a very complete index, it only applies to big populations where statistical data are significant and it does not necessarily apply to the reality of the target population of a development project. The *Socio-Economic Welfare Index* aims to address this problem. It is a simple one-value index which measures with certain accuracy the living conditions of a determined population.

The SEW-Index approach is also very useful at the stage of the project planning. By calculating the SEW-Index level before the project, the targeted population's weak points can be recognized and thus, more appropriate measures could be foreseen to address the weak points. In this way, the always scarce resources can be used optimally.

#### III.3. The socio-economic levels

In many countries, parameters exist that classify the population according to socio-economic levels. From a functional point of view, the classic division of high, medium and low class is valid and easily

<sup>3</sup> PPP is the purchasing power parity, and measures the purchasing power of one country's currency relative to that of another.

understandable. Within each class a subdivision of high, medium and low can be introduced that would render 9 socio-economic levels from high-high to low-low. These nine levels are completed by the one of “complete indigence” (street children, abandoned elderly, etc.), giving 10 socio-economic levels.

These divisions allow the distribution of the 10 cultural-socio-economic levels mentioned within a scale from 0 to 100<sup>4</sup> with both extreme values excluded. Thus, a person graded as absolutely indigent would be categorized in the 0<sup>5</sup> value, while the person that possesses everything would receive a 100.

*Socio-economic-cultural levels Table*

	Levels socio-economic	
<i>Level</i>	<i>Designation</i>	<i>Value</i>
0	destitute	(0 – 10)
1	low-low	[10 – 20)
2	low-medium	[20 – 30)
3	low-high	[30 – 40)
4	medium- low	[40 – 50)
5	medium-medium	[50 – 60)
6	medium-high	[60 – 70)
7	high-low	[70 – 80)
8	high-medium	[80 – 90)
9	high-high	[90 – 100)

#### IV. Assessment of the SEW-Index of a project’s beneficiaries

Some important considerations:

1. The SEW-Index approach uses a weighted average system of nine indicators. The concrete value that is assigned to each of the indicators should reflect the situation of the evaluated group in relation to the absolute optimum situation (which will be given in the *XXI century’s land of cream and honey*), and not with the best possible situation that the assessed group could have, given their current circumstances. Therefore, the value attributed to each indicator makes reference to an absolute maximum, and not to a relative maximum.
2. The tables for the value of each indicator have been established in consensus with development experts in several countries. This does not prevent certain subjectivity especially for the intangible goods.
3. In order to be able to calculate the social benefit generated by a project, the SEW-Index of the

<sup>4</sup> The “0” symbol is mathematically employed meaning that such value is not included.

<sup>5</sup> In fact, value 0 can never be applied because through mere existence, a person has already a positive value.

targeted beneficiaries has to be evaluated before starting the project (so called baseline). The subsequent evaluations shall be done perhaps some months or even years after its completion, depending on the kind of projects.

4. It is necessary to count on a control group that has not benefited from the project and to which the SEW-Index evaluations are simultaneously submitted to determine the extent of success over time.

To determine the value of the SEW-Index, we will follow these steps:

- a) Attribute a weight to the social welfare matrix components (IV.1)
- b) Choose the indicators to be used and the value assigned to each of them (IV.2).
- c) Utilize the indicators to measure the SEW-Index (IV.3)

### IV.1. Weighting the socio-economic welfare matrix components

The socio-economic welfare index uses a system of weighted measurement, according to the following principles, which are widely accepted by all cultures and societies:

- The tangible or intangible goods and resources (G&S) have an equal weight of 50%, reflecting the equal importance of material and spiritual G&S.
- The individual and collective goods and resources are unequally weighted, reflecting the fact that personal needs are more important than communal ones. Thus, a weight of 70% is assigned to individual G&S and a weight of 30% is assigned to collective G&S.

The following table displays the resulting matrix weights for the fusion of the two criteria.

S-E Welfare Matrix: Primary Components and Weights		Individual G&S		Collective G&S	
		weight=70%		weight = 30%	
<b>Tangible G&amp;S</b>	weight = 50%	Individual-Tangible: <b>Economic G&amp;S component</b>	weight = 40%	Collective-Tangible: <b>Public G&amp;S component</b>	weight = 10%
<b>Intangible G&amp;S</b>	weight = 50%	Individual-Intangible: <b>Personal G&amp;S component</b>	weight = 30%	Collective-Intangible: <b>Communal G&amp;S component</b>	weight = 20%

### IV.2. Criteria/SEW-Index assessment indicators

The number of indicators that could be applied to assess each of the four macro-indicators of the social welfare matrix is very big. But in order for the methodology to be easily applicable, it is indispensable to limit them to a few that are representative, simple to collect and evaluate.

For the tangible-individual component, which has the heaviest weight within the SEW-Index, three indicators are used. For the other three components, we will use only two.

The result of the distribution of the assigned weights to each of the components of the social welfare matrix and the chosen indicators is summarized as follows:

GOODS & SERVICES	Individual (70%)	Collective (30%)
Tangible (50%)	<b>Economic (40%)</b> <ul style="list-style-type: none"> <li>• <i>Income (50%)</i></li> <li>• <i>Net Assets (30%)</i></li> <li>• <i>Access Health Care (20%)</i></li> </ul>	<b>Public (10%)</b> <ul style="list-style-type: none"> <li>• <i>Public Services (50%)</i></li> <li>• <i>Sanitary conditions (50%)</i></li> </ul>
Intangible (50%)	<b>Personal (30%)</b> <ul style="list-style-type: none"> <li>• <i>General Studies (40%)</i></li> <li>• <i>Vocational Training (60%)</i></li> </ul>	<b>Communal (20%)</b> <ul style="list-style-type: none"> <li>• <i>Public Safety (60%)</i></li> <li>• <i>Civil/Human Rights (40%)</i></li> </ul>

### IV.3. Justification and use of the chosen indicators of the SEW-Index<sup>6</sup>

#### IV.3.a. Indicators of the individual-tangible component (40%)

The three chosen indicators are disposable income, net assets and access to health care.

##### 1. *Disposable Income (50%)*

This indicator receives 50% of the total value for the individual-tangible component, which results in 20% of SEWI. It has to be carefully calculated for each country.

In order to determine the SEWI value of the *income* of a person or family<sup>7</sup>, one has to:

- a. Create a comparative table of incomes for the corresponding country or region. Current statistics allow a close determination of the minimum income level of subsistence for a person or a family in each country. These may match or not with the “official minimum wage” that exists in some countries.
- b. Assign the value 10 to the minimum income necessary for subsisting. This indicates the starting point for the low-low socio-economic level. Under this income level, the person (or family) may be considered as indigent.
- c. Determine the income level that corresponds in each country or region to a person (or family) in the low-medium, low-high, medium-low levels etc.

The following example of two very different countries, Switzerland and Colombia, illustrates how to proceed. The data is from 2011. For Switzerland, the monthly (“official”) minimum wage was USD 3,368 while for Colombia it was USD 278, which means that the nominal minimum wage in Switzerland was 12 times higher than in Colombia<sup>8</sup>. On the other hand, the medium-low class had an income of USD 8,421 in Switzerland and USD 1,250 in Colombia, reducing the

<sup>6</sup> The tables presented in this paper are only rough frames. The SEWI methodology counts on very accurate tables, which are able to measure small changes in the living conditions of the targeted population.

<sup>7</sup> The income indicator has to be calculated for an **economic** unit, which normally matches with a person or a family.

<sup>8</sup> These data comes partly from official records (Colombia’s official minimum wages and social subsidy in Zurich in 2020) and partly from direct appraisal of the wages level in both countries. The USD/CHF exchange rate at this time was of 0.95, and for the USD/COP of 3,700.

variation to only 6.8 times. For the high-low class, the difference was further reduced to 5.1 times (USD 57,263 versus USD 11,110).

Income Indicator	Switzerland		Colombia	
	Yearly Income	coefficient	Yearly Income	coefficient
0	20,000	0.50	2,500	0.75
10	40,421	1.00	5,000	1.50
20	60,632	1.50	8,333	2.50
30	74,779	1.85	11,667	3.50
40	101,053	2.50	15,000	4.50
50	161,684	4.00	25,000	7.50
60	343,579	8.50	60,000	18.00
70	687,158	17.00	133,333	40.00
80	1,414,737	35.00	333,333	100.00
90	3,840,000	95.00	666,667	200.00

For the calculation of the disposable income indicator, we take into account not only the monetary income from a main economic activity (employment, micro-enterprise), but also all other types of income that the person may have thanks to a secondary or occasional activity, assistance from other family members, and especially income in kind, i.e. income received free of charge in the form of food, housing, clothing, transportation and others.

## 2. Net Assets (30%)

This indicator complements the first one and measures the saving capability of the economic nucleus. This indicator receives 30% of the total value for the individual-tangible component, accounting for 12% of the SEW-Index.

This indicator evaluates the following elements: house and/or apartment, vehicles, household appliances and furniture, working capital and savings.

Based on a first appraisal, which has to be fine-tuned and adjusted to each country and even to each region within a country, the following table can be used:

0 =	no properties
25 =	house of 50 m <sup>2</sup> in urban milieu or in rural areas with small piece of land; any kind of transport (bike, small second hand motorbike)
50 =	middle class house of 120 m <sup>2</sup> in urban area, or rural area with small property; middle level car new; saving account and pension fund
75 =	different kind of houses, rural properties, cars and bank accounts with at least 5 million USD (in PPP) <sup>9</sup>
90 =	every kind of properties and assets of at least 50 Million Euro (in PPP)

## 3. Access to Health Care (20%)

This indicator does not refer to a person’s state of health, but to the ability to be treated in the

<sup>9</sup> PPP stands for Purchase Power Parity. It is widely used to compare financial data among countries, while taking into account the different power parity.

event of illness at no extra cost by social security or health insurance.

This indicator assesses three components: the level of coverage of medical services (what insurance benefits comprise), the level of quality of medical care (how) and hospital infrastructure, and the time of access to medical services (when).

The *health care* indicator receives 20% of the total value for the tangible-individual component, which results in 8% of the SEWI.

The next table proposes a frame for the assessment of the *health* indicator:

0 =	no kind of social security
25 =	low level of security and/or difficulties accessing medical care
50 =	medium social security service, that might need to be completed by private insurance
75 =	high level insurance and medicines
99 =	all health care services covered and an excellent service

#### IV.3.b. Indicators on collective-tangible component (10%)

For this component, two indicators were chosen that are complementary: public services (infrastructures) and public sanitary conditions.

The values for the collective-tangible indicators shall be established for each community where the beneficiary population lives. Unless there are special circumstances, the same values shall be applied to all the inhabitants of the same community or neighborhood.

##### 1. Public Services – Infrastructures (50%)

This indicator refers to all public services at the disposal of the person or family community. To determine the value of this indicator, the infrastructure levels of running water, gas, electricity, telephone and internet services, roads, public transportation and urban facilities (schools, community halls and playgrounds) are analyzed. It receives 50% of the total value for the tangible-collective component, which results in 5% of the SEWI.

The following table gives a frame for the assessment of the *public services* indicator:

0 =	No kind of services (illegally occupied settlements)
25 =	poor public services, but partially existing
50 =	incomplete and/or insufficient public services
75 =	complete public services, but with a medium quality
99 =	all public services of excellent quality

The values for the public services indicator should be established for each of the communities or neighborhoods where the target population lives. Unless there are special circumstances, the same value will be applied to all inhabitants.

##### 2. Sanitary conditions (50%)



Although this indicator is greatly related to the previous indicator, it takes into account other parameters, such as garbage collection service, sewage system, sewerage treatment plants and general environmental conditions. It receives 50% of the total value for the collective-tangible component, which results in 5% of the SEW-Index.

The following basic table gives a framework for the assessment of the *sanitary conditions* indicator:

0 =	Very unhealthy and conducive to sickness (case of squatters in humid places)
25 =	insufficient sanitary condition: poor quality of infrastructure and services
50 =	satisfactory sanitary condition; medium quality of infrastructure and services
75 =	good conditions of infrastructure and services
99 =	optimal sanitary conditions

### IV.3.c. Indicators on individual-intangible component (30%)

For this component, two indicators have been chosen that are complementary: the general education level and the vocational training level (or professional formation).

#### 1. General Studies (40%)

This indicator measures the general education level (schooling). The general education indicator has a future dimension because the higher the accomplished schooling level is for a person, the easier he/she will develop his/her potentials in the future. It receives 40% of the total value for the intangible-individual component, which results in 12% of the SEW-Index.

The following table gives a framework for the assessment of the *general studies* indicator:

0 =	illiterate
15 =	knows how to read and write
30 =	primary school studies completed (5 to 6 years)
50 =	technical secondary school studies completed
60 =	secondary school studies completed [finished] (12 years)
70 =	middle technical schools (bachelor's level, 15 years)
80 =	Master's degree or equivalent (17 years)
90 =	Degree with doctorate and/or postgraduate

#### 2. Vocational or Professional Technical Training (60%)

This indicator refers to the training work level and although it is partly dependent on the previous indicator, in many cases it is quite different from it, especially for people with scarce resources.

The *professional training* indicator is also oriented towards the future. The more a person is prepared, it will be easier for him/her to be hired or to develop productive activities that shall help him/her increase his/her standard of living. Thus, this indicator receives 60% of the total individual-intangible component, which means 18% of the SEWI.

The following table gives a framework for the assessment of the *professional training* indicator:

0 =	no kind of job training
15 =	some job practical knowledge (low level non qualified)
35 =	low formal technical training (1.200 hours)
45 =	medium formal technical training (2.400 hours)
55 =	high formal technical training (3.600 hours)
65 =	specialized technical training (master degree – middle management)
80 =	good high technical training (managing leadership)
90 =	Excellent professional training and experience (general management level)

#### IV.3.d. Indicators on collective-intangible component (20%)

The two indicators of this component are public safety level and civil and human rights enforceability (rule of law). More likely, these are the most difficult to assess because these are intangible collective goods. Nevertheless, they are in some way easy to assess by comparing them with the ideal situation where there is no kind of violence and total enforceability of all rights exists. In addition, in recent years several organizations, both supranational and private, have established evaluation criteria that can be applied to establish the values of these indicators.

Although these two indicators are assessed for an entire community, personal circumstances can modify the overall assessment. Thus, for example, a corrector is applied to people who are in an illegal situation, since this situation prevents them from exercising all their rights.

##### 1. Public Safety (60%)

This indicator reflects the safety level (absence of all kind of violence) of the environment in which the target population lives. The *security* indicator receives 60% of the total value for the collective-intangible component, making up 12% of the SEWI.

This indicator measures three aspects of citizen security: peace (absence of armed conflicts, organized criminal gangs, etc.), personal security conditions (common criminality) and the effectiveness of the police or state security forces.

The following table gives a framework for the assessment of the *public safety* indicator:

0 =	very high criminality / region suffering armed conflict
30 =	criminality above the national average
50 =	criminality below the world average
70 =	low criminality
99 =	no criminality

##### 2. Civil and Human Rights enforceability (40%)

The indicator reflects the capability of individuals to exercise all kinds of rights.

The *civil and human rights* indicator can be very different according to the social class or zone

lived in and whether it is controlled by one faction or another. The *civil and human rights* indicator receives 40% of the total value for the collective-intangible component, making up 8% of the SEWI.

To establish the values of this indicator, four elements are analyzed: freedom of expression (the opposite would be repression), transparency (its opposite is corruption), political participation and the rule of law.

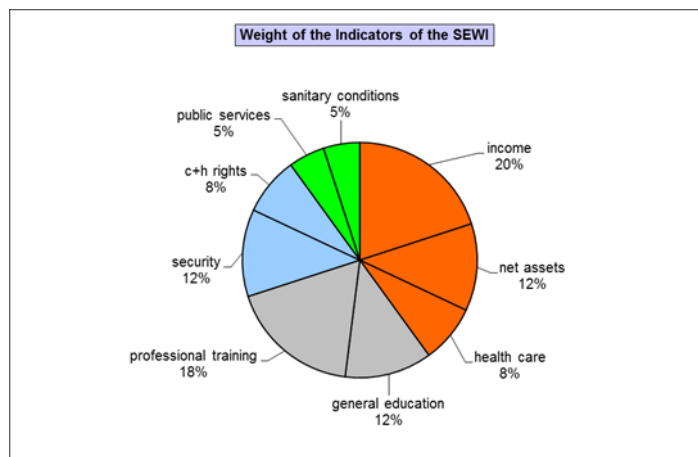
The following table gives a framework for the assessment of the *civil and human rights* indicator:

0 =	highly repressive and corrupt political system or state (no C+HR)
20 =	theoretical democracy, but no real separation of powers (high corruption and low C+HR)
40 =	real separation of powers (enforceable C+HR), middle corruption
60 =	C+HR guaranteed practically (at moderate costs) and no corruption
80 =	C+HR guaranteed and practically easily enforceable

#### IV.3.e. Ranking of the SEW-Index indicators

The following table and chart summarize what has been previously stated and classify the indicators according to their weight within the SEW-Index:

Ranking indicators	Weight
disposable income	20%
vocational training	18%
net assets	12%
general education	12%
public safety	12%
access to health care	8%
civil and human rights	8%
public services	5%
sanitary conditions	5%
<b>Total</b>	<b>100%</b>



## V. Gross and net social benefit generated by the development projects

### V.1. Evaluations and control group

The SEW-Index value is obtained through an assessment in which the pollsters proceed to gather all the data for the SEW-Index indicators. It is important that all the pollsters that participate in the assessment apply the same criteria.



- 1) Pre-project assessment of beneficiaries
  - a) If it is possible, an assessment of all the future beneficiaries shall be done.
  - b) If it is not possible to assess all the future beneficiaries, it will suffice to perform it with a random representative sample that guarantees a confidence level of 95% and a margin of error of 5%.
  - c) The assessment result determines the SEW-Index value at time 0 or  $SEWI_0$
  - d) Regarding the ideal time to conduct the surveys, it is advisable to allow a certain amount of time to pass after the project has begun, so that the beneficiaries have confidence in the surveyors. This ensures that the responses are reliable.
  
- 2) Pre-project assessment of the control group of non-beneficiaries
  - a) Theoretically, at the same time that the assessment of the future beneficiaries of the project is being performed, a control group of non-beneficiaries under the same socio-economic conditions shall also be assessed and labeled  $SEWI-C_0$ . For this group to be considered as a control group, the SEWI value, which we will call  $SEWI-C_0$ , should be very similar to that of the beneficiaries ( $SEWI_0$ ).
  - b) When  $SEWI_0$  and  $SEWI-C_0$  are not equal, but their difference is insignificant, the chosen control group can be kept. Otherwise, another group that renders an equal SEWI to the one for the future beneficiaries shall be sought.
  - c) The realization of the control group assessment is very important for the validation of the project's impact, since it allows isolating the improvements due to the project.
  
- 3) First post-project evaluation (ex-post)
  - a) After a convenient period, the first evaluation takes place. The period depends on the kind of project.
  - b) It is not necessary that this evaluation includes all the project's beneficiaries, as in many cases this might be impossible. What is really necessary is that the sample of the population's ex-post evaluation is statistically sufficient to give a high degree of confidence in the findings.
  - c) At the moment of doing the ex-post evaluation there is a need to adjust some variables, especially the income indicator, to the new market conditions. This becomes more necessary when some time has passed since the calculation of the  $SEWI_0$ .
  - d) At the same time, an assessment of the control group is done using the same criteria.
  - e) The results of these assessments are labeled as  $SEWI_1$  for the beneficiaries and  $SEWI-C_1$  for the control group.
  
- 4) Further post-project evaluations
  - a) For the purpose of verifying the sustainability of the project benefits, it is necessary to regularly undertake subsequent SEW-Index evaluations.
  - b) Through the passage of time, it will be harder to determine what part of the SEW-Index improvements can be attributed to the project and which ones are due to improved general economic conditions. Nevertheless, the regular evaluation of the beneficiaries group and the control group will render interesting information regarding the sustainability of the project's impact.

## VI. Social benefit and social return

### VI.1. Gross social benefit

- a) Gross improvement of socio-economic welfare or gross social benefit (GSB) generated by the project is the difference between the values of the SEW-Index obtained in two evaluations:

$$\text{GSB} = \text{SEWI}_1 - \text{SEWI}_0$$

- b) It is possible that the  $\text{SEWI-C}_1 - \text{SEWI-C}_0$  value (of the control group) is also positive, i.e., that living conditions have also improved for reasons unrelated to the project. This extrinsic improvement reflects the changes that have occurred in society during the period between the two evaluations.
- c) The intrinsic improvement to the socio-economic welfare level or of the intrinsic social benefit (ISB) produced by the project is determined by the formula:

$$\text{ISB}_1 = (\text{SEWI}_1 - \text{SEWI}_0) - (\text{SEWI-C}_1 - \text{SEWI-C}_0).$$

### VI.2. Net social benefit

- a) Up to this point we have not considered in the calculation of the ISB the costs inherent to the implementation of the project, since we have only considered the impact on the beneficiaries of the project, without taking into account either the cost or the sources of financing.
- b) In the case of almost all humanitarian aid projects and in many development cooperation projects, a large part of the project costs are financed in the form of donations. In this case the net social investment, understood as the sum of all project costs that are not financed by the beneficiaries themselves, has to be taken into account in calculating the overall social benefit created by the project.
- c) Net social investment (NSI) can be measured fairly easily in monetary units. In turn, these contributions can be converted into IBES points, using the same tables that are used for the disposable income indicator. In this way, the following formula can be used to calculate the net social benefit:

$$\text{NSB}_1 = (\text{SEWI}_1 - \text{NSI}_1) - \text{SEWI-C}_1,$$

where  $\text{NSI}_1$  is the value of the net social investment made up to time 1, measured in SEWI scale points.

- d) In the case that the project beneficiaries fully finance their costs,  $\text{NSI}_1$  is equal to zero.

### VI.3. Net social return

Financial return is the profit obtained on an investment. It is measured in monetary terms and is usually expressed as a percentage. The return indicates the company's ability to generate value.

In the case of social projects, social return can be measured by the change in SEWI points before and after the project. This variation reflects the social benefit created by the project, and is therefore

much more complete than financial return, as it incorporates all the elements that make up the beneficiaries' living conditions.

To calculate the net profitability of a social project, we will compare two situations:

- the value of the SEWI of the beneficiaries after they have participated in the project
- the value of the SEWI that the beneficiaries would have if instead of participating in the project, they had received a check for the value of what the project invests in them.

As an example:

- a) Assume that the SEWI value of the beneficiaries before the project is 22.3.
- b) Let us further assume that the project invests USD 720/beneficiary, and that the disposable income indicator at time 0 is 12.1 points, which corresponds to an income of USD 2,210.
- c) If the sum of USD 700, instead of being invested in the project, had been given directly to the beneficiaries, their income that year would have increased by that amount to USD 2,930. The new value of the disposable income indicator would be 19.2.
- d) In this situation, it could be calculated that the SEWI of the beneficiaries, by the sole effect of the change in disposable income, would have increased from 22.3 to 23.8, i.e. an improvement of 1.5 points.
- e) However, after the project, the SEWI of the beneficiaries, due to the effect of the changes in all the indicators, was 26.5, which represents an improvement of 4.2 points compared to their situation before the project.
- f) The net increase in SEWI as a result of the project is therefore 2.7 points (26.5 - 23.8).
- g) The social return of the project is 11.3% ( $26.5/23.8 - 1$ ).

## VII. Explanatory example

Everything that has been previously stated has been used in different projects. I am showing the one conducted with the Carvajal Foundation of Cali.

The goal of the project was to improve the living conditions of micro-entrepreneurs, through skills-oriented and entrepreneurial training. The project began in 2008 with the construction of the training center facilities, and concluded at the end of 2010 with the training of the third cohort of micro-entrepreneurs.

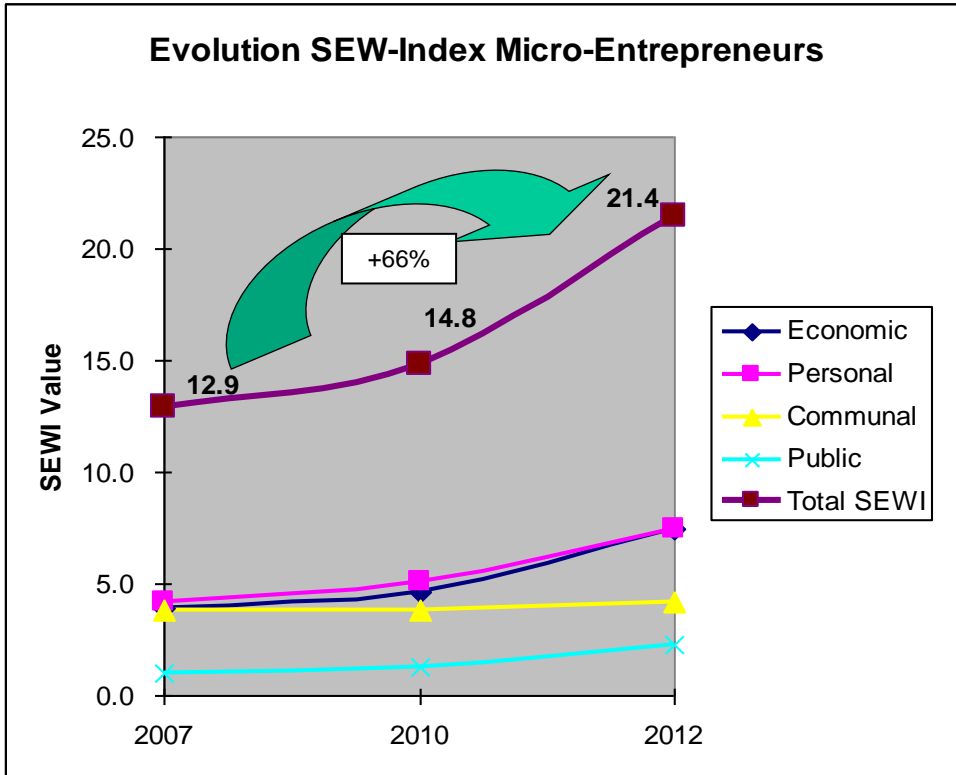
To conduct the impact evaluation, baseline data were collected at the end of 2008 (at the beginning of the training project), and subsequently two ex-post evaluations were conducted: 2010 and 2012. Although a control group was used, for simplicity, only the results from the project group are presented in this example.

### SEWI Evaluation

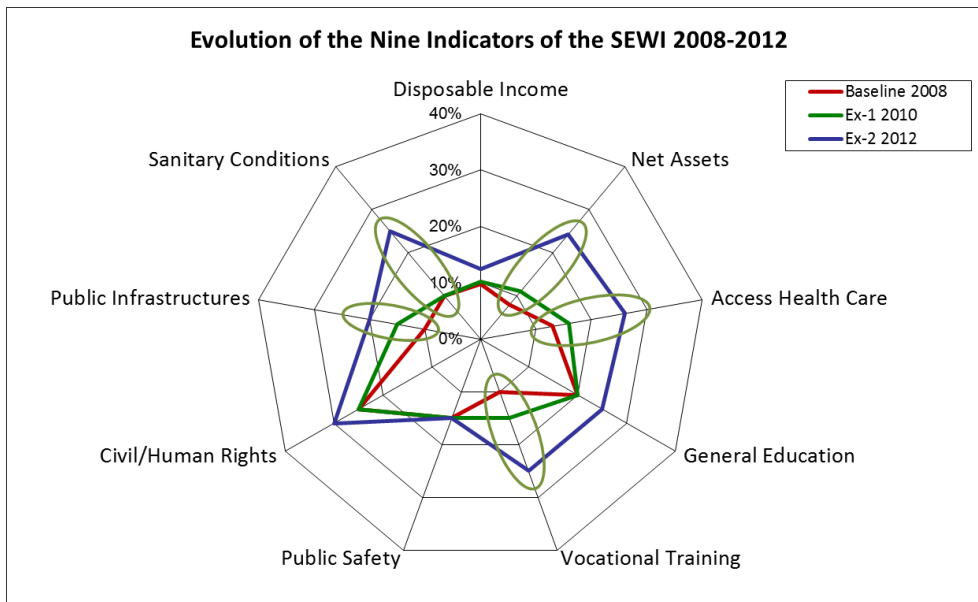
#### Project Micro Entrepreneurs, Cali

Indicators	2008		2010		2012	
	Gross Value	SEWI Value	Gross Value	SEWI Value	Gross Value	SEWI Value
Income	9.7	4.9	10.2	5.1	12.4	6.2
Net Assets	8	2.4	11	3.3	24.3	7.3
Access Health Care	13	2.6	16	3.2	26	5.2
<b>Economic</b>	<b>16</b>	<b>9.9</b>		<b>11.6</b>		<b>18.7</b>
<b>SEWI Economic (40%)</b>		<b>3.9</b>		<b>4.6</b>		<b>7.5</b>
General Studies	20	8.0	20	8.0	25	10.0
Professional Training	10	6.0	15	9.0	25	15.0
<b>Personal</b>		<b>14.0</b>		<b>17.0</b>		<b>25.0</b>
<b>SEWI Personal (30%)</b>		<b>4.2</b>		<b>5.1</b>		<b>7.5</b>
Public safety	15	9.0	15	9.0	15	9.0
Civil/Human Rights	25	10.0	25	10.0	30	12.0
<b>Communal</b>		<b>19.0</b>		<b>19.0</b>		<b>21.0</b>
<b>SEWI Communal (20%)</b>		<b>3.8</b>		<b>3.8</b>		<b>4.2</b>
Public Infrastructure	10	5.0	15	7.5	20	10.0
Sanitary Conditions	10	5.0	10	5.0	25	12.5
<b>Public services</b>		<b>10.0</b>		<b>12.5</b>		<b>22.5</b>
<b>SEWI Public (10%)</b>		<b>1.0</b>		<b>1.3</b>		<b>2.3</b>
<b>Total SEWI</b>		<b>12.9</b>	<b>1.85</b>	<b>14.8</b>	<b>6.6</b>	<b>21.4</b>
<b>Total Improvement SEWI (absolute value and in %)</b>					<b>8.5</b>	<b>66%</b>

The chart of the impact evaluation results gives a clear idea of the improvement that the project brought to their living conditions.



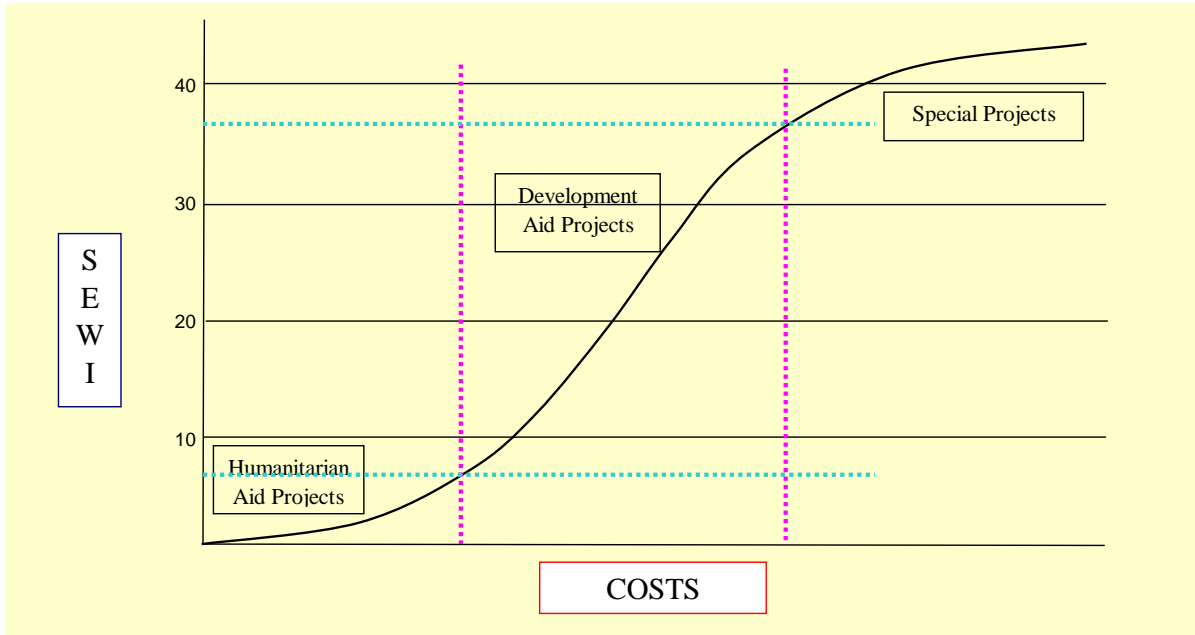
The results of the impact assessment can also be presented in a network graph as follows, in which the green ellipses show the indicators in which the variations have been most significant:





## Socio-Economic Welfare Index – SEWI

The results obtained confirm the assumption that the social impact increases when the beneficiaries of the project have reached a value in the SEW-Index over 12-14 points. The figure hereunder shows the typical relationship between SEW-Index and costs.



Therefore, it can be concluded that the SEW-Index is a very suitable instrument for measuring social impact in adult populations, and that it accurately (although always limited or partial) reflects the complexities of the real situation of a beneficiary group and the progress made through a social project.

*Juan J. Alarcon*  
*Zurich, 02.06.2021*