3    **Using the Sustainable Development Goals Towards a Better Understanding of**

4    **Sustainability Challenges**

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63    **Abstract**    The United Nations General Assembly agreed and approved in September

64    2015 the document  "2030 Agenda for Sustainable Development", which contains a set

65    of measures aiming to balance economic progress and protection of the

66    environment, whilst at the same time remain aware of the need to address the many

67    disparities still seen between industrialised and developing countries. The Agenda

68    document consists of 17 Sustainable Development Goals (SDGs), which among many

69    other tasks, intend to eradicate poverty and create better health conditions in both

70    developed and developing countries.

71        But despite the need for and the relevance of the SDGs, it is unclear how they

72    may help to address present and future sustainability challenges. Based on the need to

73    shed some light on such a relationship, this paper describes each of the SDGs, and

74    offers an analysis of the extent to which their implementation may offer support to on-

75    going attempts to handle some of the pressing problems seen in pursuing sustainable

76    development. Three case studies are presented to show in practice how best the SDGs

77    can be handled. The paper concludes that the process of implementing the SDGs offers

78    unrivalled opportunities to advance equal opportunity and foster economic

79    empowerment, helping countries to promote the cause of sustainable development in

80    their territories, hence benefitting their populations.

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82    **Key words**    Sustainability, Sustainable Development, Sustainable Development

83    Goals, Case Studies and Challenges.

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## 1. Introduction: Sustainability Challenges

The main goals to address present and future sustainability challenges, on a global scale, are moulded within a series of objectives adopted by the United Nations in the scope of the document "Transforming our World: the 2030 Agenda for Sustainable Development", where the adherent states manifest a clear intention of creating a connection between the three levels of sustainable development: economic, social and environmental, throughout 17 goals and 169 objectives (UN, 2015). According to Waage et al. (2015), the SDGs will mainly act in the areas of environmental justice, governance, and partnership among the subscribing states.

Article 3 of the Universal Declaration of Human Rights states: "Everyone has the right to life, liberty and security of person" (UN, 1948). These ideals are clearly integrated in the pathway for sustainable development, aiming to balance economic progress and protection of the environment, but also mindful of social interests (Emas, 2015; Dempsey et al., 2011), which are fundamental factors for a healthy and prosperous life. This is why the 2030 Agenda for Sustainable Development is heavily marked by a human rights approach, also present in the 17 Sustainable Development Goals mentioned within the document.

The SDGs are an improved adaptation of the Millennium Development Goals (MDGs), which reached their deadline in 2015, which intended to eradicate misery and create better health conditions within developing countries (IPEA, 2010; Sachs, 2012; Osborn et al., 2015; Constanza et al., 2016). Pursuant to a more ambitious vision, the SDGs will be a key instrument to guide social development and environmental sustainability globally. The SDGs are intended to embody a universally shared vision of development towards a safe, just and sustainable space for all human beings. They are

111     based on the principle that everyone and every country should resume responsibility for

112     playing their part in delivering on this vision. Therefore, the focus will be not only on

113     international cooperation, but also on eliminating discrimination and inequalities within

114     the countries.

115         In addition, the SDGs will pay more attention to issues of environmental

116     sustainability than was expressed by the MDGs (Griggs et al., 2013). A global concept

117     of environmental injustice reflects segregation in the access to goods, areas and

118     environmental risks among socially different groups (defined by race, class, gender and

119     other characteristics), beyond their involvement and recognition of environmental issues

120     (Agyeman et al., 2002; Agyeman, 2005; Elvers et al., 2008; Schlossberg, 2013).

121         In a context post-2015 of the Agenda of Sustainable Development, came the

122     critical evaluation of its results, which led to different opinions with regards to whether

123     the Millennium Development Goals were successful. For example, goals associated

124     with poverty and hunger eradication had positive results in some specific regions, such

125     as Eastern Asia, but ended up having insignificant accomplishments in sub-Saharan

126     Africa, Southern Asia and Oceania (Yiu and Saner, 2015). Whilst the MDGs were

127     focused mainly on developing countries and extremely dependant on funding from

128     richer countries, the SDGs consider human development, human rights and equity in all

129     countries, creating partnerships with the private sector, the public sector and the civil

130     society organisations, in order to achieve sustainable development (Kumar et al., 2016).

131         For the public sector, barriers regarding the adoption of environmental policies

132     include: lack of political commitment; inadequate or unclear responsibilities; inadequate

133     cooperation between political actors; insufficient financial and human resources; lack of

134     evidence or certainty regarding global scenarios, and insufficient knowledge-brokerage

135   and networking (Clar et al., 2013). On this path, the SDGs can also be used to facilitate

136   the implementation of strategies for sustainable development, both in public and private

137   sectors, serving as a guideline for those actions.

138          Nonetheless, the public's participation remains an essential tool in the

139   achievement of sustainable development. On that note, behaviour changes are a good

140   example of how to make progress. However, individual changes are not enough to

141   concrete the SDGs, there is yet a necessity for "changes in household behaviours -

142   particularly in the areas of food consumption, transport, energy use and leisure - if we

143   are to achieve more sustainable consumption of natural materials and energy"

144   (Hayward, 2015, p. 65). Behaviour changes can also contribute to the acceptance and

145   proper use of physical and technical innovations reducing environmental impacts (Steg

146   and Vlek, 2008).

147          The 2030 Agenda states that the determination to mobilize global partnerships

148   "[...] based on a spirit of strengthened global solidarity, focused in particular on the

149   needs of the poorest and most vulnerable and with the participation of all countries, all

150   stakeholders and all people" (UN, 2015, p. 2). The many important challenges that the

151   SDGs are proposing are not something that countries can deal with in isolation. To

152   achieve a long-term sustainability, those partnerships must be based on mutual interests,

153   whilst learning to work together in the making of a real change (Evans and van der

154   Heijden, 2014).

155          Even though the responsibility of conducting national policies for a sustainable

156   economy and sustainable human development relies on each country, with the support

157   of strong and coherent global economic governance, the ideals behind the SDGs will

158   transform into real policymaking. This is the background against which this research

159    has been conducted. In particular, it critically reviews the SDGs, and subsequently

160    analyses the extent to which their implementation may offer support to on-going

161    attempts to handle some of the pressing problems seen in pursuing sustainable

162    development. The paper is organized as follows: section 2 provides an in-depth

163    description of the SDGs, with a view to providing better understanding of related

164    sustainability challenges and their connections; three different case studies are presented

165    in detail in the following section; in section 4, the discussion is centred on the lessons

166    learnt from the case studies and the paper ends in section 5 with a synthesis of

167    conclusions and recommendations.

168

169    **2. Handling the challenges: the Sustainable Development Goals Scope**

170           According to Sachs (2012, p. 2207), our society is facing many challenges given

171    that human activity has been changing the Earth's dynamic, leading to massive

172    greenhouse gas emissions and environmental pollution, acidification of the oceans and

173    loss of biodiversity. Therefore, "in view of these dire and unprecedented challenges, the

174    need for urgent, high profile and change producing global goals should be obvious".

175    This is the basic idea behind the creation of the SDGs.

176           SDG1 places an emphasis on ending all forms of extreme poverty, which is

177    currently measured as people living on less than $1.25 a day (United Nations, 2016). It

178    puts an emphasis on reducing poverty by half the proportion of people of all ages,

179    according to respective national definitions. This would require implementation of

180    nationally appropriate social protection systems. The target of providing equal rights to

181    economic resources, as well as access to basic services (Target 1.4), creates an

182    ambitious ground for mass proliferation of integrated and inclusive economic

183    development. This, if achieved, will help in mainstreaming poor and vulnerable groups

184    in the process of economic development and thus, positively influencing the 'economic

185    well-being' of the target groups. Linking the impact of economic, social and

186    environmental shocks, including extreme natural disasters, to poverty is an especially

187    significant measure in ensuring the sustainability of the planned poverty reduction

188    target. This should be of great help in sustaining the economic well being of the poor, as

189    often, such disasters and shocks reduce the developmental impact by significant levels,

190    as well as limiting the opportunities to pursue inclusive economic growth. If good

191    measures can be implemented to protect the poor from such extreme adversities, it

192    would definitely be a milestone in accelerating the efforts towards improving the

193    economic conditions of the target groups. This goal also focuses on significant

194    mobilisation of resources from a variety of sources through enhanced development

195    cooperation, which will help in extending access of resources to poor and vulnerable

196    people in developing and lesser-developed countries. This not only sets out ground for

197    more harmonized economic development across the world but also creates many

198    opportunities, through collective development process innovations, moving seamlessly

199    beyond the geographical boundaries. However, this also poses a challenge in terms of

200    country preferences and bias in promoting the development cooperation according to

201    their choices, which is sometimes subjectively objective.  Overall, SDG1 brings hope

202    with tangible mechanisms to realize them and thus, making the world free of poverty.

203    At the same time, one has to be cautious of issues of income inequality, as efforts to

204    reduce poverty on the one side and increasing income inequality on another, this may

205    not help in developing balanced and inclusive economies with poverty eradication goals

206    in the truest sense.

207     SDG 2, which aims to end hunger and achieve food security with improved

208     nutrition, links sustainable agriculture promotion and offers a cushion to the

209     accomplishment of the poverty eradication goal. This goal is therefore essential to

210     guaranteeing environmental justice. The target of ending hunger by ensuring access to

211     safe, nutritious and sufficient food all year round to all the age groups (United Nations,

212     2016), will prove to be a significant milestone in providing this basic and essential

213     condition for good quality of life to poor and vulnerable sections of society. This goal

214     details the specific food and nutritional needs of distinct groups; such as children under

215     5 years of age, adolescent girls, pregnant and lactating women and older persons and

216     thus, sets a foundation for bringing systematic interventions to end hunger with a

217     minimum required nutrition level. The focus on improving the agricultural productivity

218     and incomes of small-scale food producers, in particular women, indigenous peoples,

219     family farmers, pastoralists and fishers, will have a direct impact on economic

220     sustainability of small-scale agricultural producers as well as creating access to 'food

221     with nutrition' at a local level. This approach aligns with Gandhi's concept of rural and

222     village sustainability (Rajvanshi, 2016). This goal also addresses the major bottlenecks

223     in effective small-scale agricultural production by targeting issues of land access, know-

224     how, financial access, value-addition and market access to small-scale agricultural

225     producers. Increase in agricultural investment with elimination of export subsidies and

226     trade restrictions are likely to significantly boost the agricultural production at all levels.

227     A focus on climate friendly food production practices will help in minimizing the risks

228     linked with natural disasters, which in some countries, such as India, have previously

229     resulted in a number of adverse impacts, including suicide by small-scale farmers.

230     Proposed steps to control the food commodity market volatility will not only help in

231     controlling the food prices but would also ensure better availability of cost-effective

232     food to poor and vulnerable groups. In all, this goal seems to offer promises for self-

233     sufficiency in food availability through indigenous production, whilst at the same time

234     opening up agriculture as one of the major sources of living for small farmers.

235         SDG 3, which focuses on ensuring healthy lives and promoting well being for

236     all, has a direct impact on quality of life by ending premature mortality and preventable

237     deaths of newborns (United Nations, 2016). Efforts to end the epidemics of AIDS,

238     tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne

239     diseases and other communicable diseases are likely to directly enhance healthy living.

240     Strengthening systems to prevent and treat narcotic drug abuse, harmful use of alcohol

241     and controlling tobacco use will certainly help in improving the well being of all ages.

242     Provisions for universal access to sexual and reproductive healthcare services would

243     impact the healthy living of socially and/or economically disadvantaged women and

244     girls across the world. The target to achieve universal health coverage, including

245     financial risk protection, access to quality essential healthcare services and access to

246     safe, effective, quality and affordable essential medicines and vaccines is particularly

247     important for the economically disadvantaged section of society. The focus on reducing

248     the number of deaths and illnesses from hazardous chemicals and air, water and soil

249     pollution and contamination will create new partnerships, whilst at the same time link

250     this goal to environmental sustainability targets. As quoted by Cutter (1995), Goal 3 and

251     specifically its targets 3.3 and 3.9 are needed to achieve environmental justice. Efforts

252     to increase health financing and the recruitment, development, training and retention of

253     the health workforce in developing and least developed countries would also help in

254     creating new jobs and thus, positively impacting SDG 1. Additionally, it highlights the

255   great participation of NGOs and other stakeholders at all levels and thereby,

256   accelerating the employment and wage earning potential of the people involved.

257        SDG 4, touches on one of the most important areas, inclusive and quality

258   education. The target to ensure that all people have access to completely free, equitable

259   and quality primary and secondary education will be a catalyst in strengthening the

260   capacity building, required for other SDG indicators in the future. A focus on quality

261   early childhood development, care and pre-primary education (United Nations, 2016), is

262   an effort to improve the education value-chain from the very earliest stage. Affordable

263   and quality technical, vocational and tertiary education, including university education,

264   will open new opportunities for all. Elimination of gender disparities in education and

265   vocational training would be particularly helpful in enhancing women's participation in

266   the job market and economy.  An increase in scholarships would open the way for

267   seamless global knowledge exchange, especially for those in developing or least

268   developed countries. Mainstreaming of the SDGs in education at all levels remains a

269   key focus of this goal. This implies that the process of higher education would call for

270   significant innovations in terms of 'what is being delivered' and 'how it is being

271   delivered.' This goal will also help in creating jobs within the educational sector at

272   different levels and would also contribute to large number of employment generation

273   with a global movement of teachers. Overall, if implemented carefully and

274   systematically, this goal will have direct impact on the success of all the other SDGs.

275        Ensuring gender equality in all forms and all areas remain a key focus of the

276   fifth SDG. Elimination of all forms of violence against women and girls in the public

277   and private spheres, including trafficking and sexual and other types of exploitation

278   (United Nations, 2016) would help in improving the safe and healthy living of women

279    and girls.  The target to eliminate practices of early and forced marriage and female

280    genital mutilation is a significant step in ensuring the good quality of life for women

281    and girls, particularly in areas where these are imposed in the name of tradition or

282    custom. Steps for social protection and regulating unpaid care and domestic work will

283    add to dignity and quality of life for women around the world. Ensuring participation of

284    women in decision-making and leadership would provide a sound basis for gender

285    equality in the future. Reforms to provide equal financial and economic rights to women

286    will not only help in improving the quality of women's life but also would positively

287    impact the family well being, especially where the woman takes the role of leadership

288    within the family. Overall, this is a very positive and significant goal to contribute to

289    sustainable well being of women and girls.

290         Goals 6 and 7, as a whole, are required to guarantee environmental justice in a

291    global context, by providing universal and secure access to water and renewable sources

292    of energy. Water, hygiene and sanitation remain a key developmental challenge in many

293    areas of the world. The sixth SDG aims to ensure availability and effective management

294    of water and sanitation for all (United Nations, 2016). The target to achieve universal

295    and equitable access to safe and affordable drinking water for all with access to

296    adequate and equitable sanitation and hygiene will help in significantly improving

297    sustainable living. A focus on increased water-use efficiency across all sectors will help

298    in addressing water scarcity and thus, substantially reduce the number of people

299    suffering from water scarcity. The efforts to improve water quality will link this goal to

300    the various SDGs on environmental sustainability. Trans-boundary cooperation in

301    integrated water resource management will have additional impacts on social and

302    economic cooperation across boundaries and thereby, limit the political tensions in

303      some cases. Supporting and strengthening the participation of local communities in

304      improving water and sanitation management will be closely linked with the sustainable

305      community partnership linked development focusing on multiple dimensions of the

306      SDGs. Expansion of international cooperation and capacity-building support to

307      developing countries in water and sanitation related activities and programmes;

308      including water harvesting, desalination, water efficiency, wastewater treatment,

309      recycling and reuse technologies will also provide a strong support to promote the

310      agricultural production (SDG2) and thus, impact the quality of life both directly as well

311      as indirectly.

312           Access to affordable energy is instrumental in promoting all the development

313      efforts. This access to energy remains a key challenge in many developing or lesser-

314      developed countries and is a major bottleneck affecting GDP growth. SDG 7 addresses

315      this issue by committing to ensure access to affordable, reliable, sustainable and modern

316      energy for all (United Nations, 2016). This goal focuses on improving the energy

317      efficiency on the one side, whilst enhancing the share of renewable energy on the other.

318      The focus on energy infrastructure expansion will also result in increased economic

319      activities and employment opportunities. International cooperation for clean energy

320      research and technology transfer will have direct linkages with the international

321      cooperation in education. The accomplishment of the targets in this area is likely to

322      significantly contribute to poverty reduction and sustainable living.

323           Sustaining the inclusive and sustainable economic growth with productive and

324      decent working condition for all is the focus of SDG 8 (United Nations, 2016). This

325      goal links the country level economic sustainability to the individual level work dignity.

326      The focus on country level growth strategy with context specific technology and

327     industry choice should definitely help in accomplishing the minimum 7 percent GDP

328     growth target, a level set for the least developed countries. The provisions to ensure

329     labour standards and human dignity will help in strengthening the working conditions in

330     global supply chains. Prevention of forced labour, including child labour and child

331     recruitment in the military will help in mainstreaming children within the development

332     process. The target to link tourism to local culture will help in preserving the cultural

333     identities and values, whilst contributing to employment creation and entrepreneurship

334     at the same time. An increase in banking and financial services will provide new

335     employment opportunities for young people. If accomplished, this goal would

336     significantly eradicate unemployment and economic challenges within different country

337     contexts. Remarkably, this goal also intends to dissociate economic growth from

338     environmental degradation (Target 8.4), thus pointing out the responsibility of great

339     producers and other controllers in promoting environmental justice.

340         Infrastructure and technological advancements are the key pillars of

341     development in modern society. SDG 9 aims to promote inclusive and sustainable

342     industrialization by focusing on technology, innovation and sustainable infrastructure

343     (United Nations, 2016). The efforts to strengthen infrastructure will directly influence

344     employment creation and economic development within different contexts, in addition

345     to improving the quality of life. Providing Internet access to all by 2020 will help in

346     ending the digital divide in developing and least developed countries. International

347     cooperation in scientific research and technology development will help in cross border

348     knowledge transfer.  A focus on indigenous technologies will help in local capacity

349     building for innovation driven solutions to the different human related problems.

350    Reducing inequalities amongst countries remains the key focus of SDG 10

351 (United Nations, 2016). The target on progressively achieving income growth of the

352 bottom 40 percent of the population at a rate higher than the national average is a

353 significant move to improve the conditions of those who are at the bottom of the

354 pyramid. By promoting the social, economic and political inclusion of all, irrespective

355 of age, sex, disability, race, ethnicity, origin, religion or economic or other status offers

356 hope for a more globalized world in the next 15 years to come. Fiscal, wage and social

357 protection policies will all help in achieving greater equality. This goal aims at more

358 regulated and integrated global financial markets to prevent artificial economic shocks.

359 Planned and well managed migration targets with a focus on equal opportunity promises

360 for systematic talent movement across the globe. An increase in financial assistance to

361 the least developed and developing countries will help in fighting the different

362 economic, social and consequent political challenges within these countries.

363    Sustainable urbanisation requires improvement in good quality and safe housing

364 access to all, with sustainable transportation and other support services available. SDG

365 11 focuses on these issues to ensure that human settlements and cities are inclusive,

366 safe, resilient and sustainable (United Nations, 2016). Specifically, it seeks to i) mind

367 the urbanisation of shanty towns (Target 11.1), ii) guarantee sustainable public

368 transports (11.2), iii) reduce deaths caused by water or air pollution (11.5 and 11.6), and

369 to iv) ensure access to sustainable green areas (11.7), with special attention given to the

370 more vulnerable populations. Access to safe housing is a major challenge of poor and

371 vulnerable groups of the society. The target to provide safe and affordable housing and

372 upgrading slums will help in improving the quality of life. The target to use local

373 building material in this process will help in strengthening the local building material

374 industry.

375       Sustainable consumption and production patterns are the key focus of SDG 12

376 (United Nations, 2016). The second half of 20th century witnessed exponential growth

377 in consumption and production, which is believed to have lead to a state of uncontrolled

378 growth with adverse environmental impacts. This can also be considered as a major

379 cause behind the growing income inequality despite numerically growing GDP. Under

380 the proposed framework, the developed countries will be taking the lead in

381 implementing a 10 year framework of programmes on sustainable consumption and

382 production. This goal focuses on encouraging efficient use of natural resources and

383 reducing food wastage at all stages of the food value-chain. Improvement in public

384 procurement procedures will help in checking the corruption from both the demand as

385 well as from the supply side. The shift towards sustainable production will also have a

386 positive impact on environmental sustainability.

387       Although climate change and environmental sustainability issues are directly or

388 indirectly integrated with most of the SDGs, SDG 13 particularly focuses on combating

389 climate change and its impact (United Nations, 2016). Introducing education and

390 capacity building initiatives for climate chain mitigation, adaptation and impact

391 reduction is one of the key priorities of SDG 13. By integrating the climate change

392 issues in national policies and strategies, the goal sets a foundation to the climate

393 change and environmental mainstreaming at different levels. This goal will help in

394 controlling the adverse impacts of climate change related issues. Specifically, goal 13.b

395 intends to support marginalized communities and vulnerable groups of women and

396  young people, in order to lower the risks of climate change and environmental

397  degradations.

398       Conservation of natural resources is another dimensions of environmental

399  sustainability. SDG 14 aims to conserve and ensure sustainable use of the ocean, seas

400  and marine resources (United Nations, 2016).  It aims to reduce marine pollution and

401  protect marine and coastal ecosystems. Efforts to regulate fishing and end overfishing

402  will help in improving the access and quality of foods linked to the fishing industry. A

403  focus on improving economic benefits to Small Island developing states and least

404  developed countries from the sustainable use of marine resources will also help in

405  promoting employment and economic development.

406       Another important aspect of environmental sustainability is sustainable use of

407  terrestrial ecosystems and forests, which is captured well by SDG 15 (United Nations,

408  2016).  The targets include protecting mountain ecosystems and biodiversity and

409  reversing land degradation. The focus on sustainable forest management will help in

410  reducing deforestation and thus, positively impact upon environmental sustainability.

411  Efforts to end the poaching and trafficking of protected species will create need for

412  alternative livelihood opportunities for the local communities, which can be planned

413  through sustainable capacity building.

414       Peace and harmony is an essential condition for sustainable human living. SDG

415  16 focuses on promoting peaceful and inclusive societies with access to justice (United

416  Nations, 2016), and calls for equal access to knowledge and justice services. Reducing

417  the illicit financial and arms flows will be a significant move towards promoting peace.

418  Efforts to end corruption will help in mobilising more money for development efforts.

419  This also implies more transparency in governance of institutions at all levels.

420    Participation of developing countries in the institutions of global governance would be a

421    significant move in creating a level playing field for global development.

422        SDG 17 focuses on issues related to effective implementation of all the other

423    remaining SDGs, promoting peaceful and inclusive societies with access to justice

424    (United Nations, 2016). This would involve domestic resource mobilisation, assisting

425    developing countries in external resource mobilisation, international cooperation for

426    transfer of environmentally sound technologies, capacity building, policy coherence,

427    data monitoring and multi-stakeholder partnerships. This goal promises more resources

428    and innovative partnerships for pushing collective efforts towards sustainable

429    development.

430        In terms of sustainability challenges, and from an environmental perspective,

431    there is evidence that all previous goals are strongly interlinked. More specifically, in

432    much the same way as a "chain is only as strong as its weakest link", sustainable

433    development and environmental justice will only perform to the limits of its weakest

434    SDG.

435        As a case in point, climate change mitigation will require major transformations

436    in the water, energy and food sectors, and it is also indispensable to protect people's

437    well being. It has been proven that climate change has direct effects on health, with the

438    increase in heat related deaths, the consequences of food crisis, and various health

439    problems related to greenhouse gases such as respiratory disorders as well as mental

440    health disorders associated with natural disasters (Patz et al., 2014).

441        Many health related goals are also related to reducing inequalities, namely

442    through: quality education; gender equality; decent work and economic growth; peace,

443    justice and strong institutions. For Doyle and Stiglitz (2014, p.6), "Extreme inequalities

444  tend to hamper economic growth and undermine both political equality and social

445  stability." Moreover, the World Economic Forum has already stated that inequalities

446  slow down the process of sustainable development, and hence jeopardize cooperation

447  for international environmental agreements on climate change (Pickett, 2015).

448  According to Blanke and Corrigan (2016), the key answer to undermining inequalities is

449  to find a way of conducting public and private stakeholders to a people centred

450  economic policymaking.

451      Aside from lowering inequalities, the reduction of all forms of violence is also

452  highlighted as extremely important in order to pursue sustainable development. Studies

453  in this area reveal that the more countries are affected by violence and fragility, the

454  lesser they manage to achieve sustainable human development (Crawford, 2015).

455  Furthermore, gender based exclusion is one of the characteristics of conflict regions

456  (Chandran et al., 2015), which is unfortunate because the participation of women in the

457  process of ending violence is considered to be extremely valuable.  According to Fink

458  and Bhulai (2015), women play major roles as peace builders and countering violent

459  ideologies. Once again, promoting equality is linked not only to economic aspects, but

460  is also a major driver to maintain local and regional stability.

461      Another important issue society is now facing is that of both internal and across

462  borders displacement, also related to climate change, inequalities and health. In mid-

463  2015 there were 20.2 million refugees and an estimate of 34 million internally displaced

464  people (Beardmore, 2015). This issue was not well explored in the 2030 Agenda.

465  Despite the slogan of "Leaving no one behind", little was done to situate migrants and

466  refugees in humanitarian planning (Beardmore, 2015). Migration needs to combine the

467  economic, environmental and social aspects of sustainable development and, thus, it

468    requires broader discussions on the matter at a global, regional and national level, so

469    that coherent policies between those levels can be accomplished (Schraven et al., 2016).

470
471    **3. Case Studies: The Implications of the Sustainable Development Goals (SDGs)**

472    Three case studies have been selected based on; a) their scope, b) the thematic

473    emphasis and c) the diversity of stakeholders, to illustrate how the implementation of

474    coherent strategies towards the achievement of all internationally agreed development

475    goals is put into practice. They are representative examples to give an adequate

476    overview of sustainability challenges throughout the planet.

477

478    **3.1. Spain**

479    In the discussion on the post-2015 development agenda, particularly in the

480    definition of the Sustainable Development Goals (SDGs), Spain has maintained an

481    active position (Pedrajas 2014). Specifically, Spain has led, in 2013, the High-Level

482    Consultation in Hunger, Food Security and Nutrition. It has supported consultations

483    with the private sector in Latin America in 2014 and it has actively participated in the

484    Open Working Group of the General Assembly on the Sustainable Development Goals,

485    which has been in charge of the definition of all SDGs and their targets. There is

486    however an issue: its international position does not necessarily complement its

487    domestic policies.

488    In brief, Spain's economic and social situation remains marked by a

489    comprehensive, multidimensional, global crisis. The austerity measures in public

490    policies adopted in the past few years have severely impacted on the Spanish society,

491    particularly on the most vulnerable segments of the population. The inequality gap has

492    increased significantly and the poverty rate continues to grow, especially among minors.

493       In this context, Spain's ability to reach the targets set out in the SDGs has been

494    questioned, to some extent, in a recent report. On the one hand, and based on the SDG

495    Index (Sachs et al 2016), a tool developed to rank countries with regards to their initial

496    status on the 17 SDGs, Spain comes only 30th among 149 countries included in the

497    study, and 26th among OECD countries (34, in total). On the other hand, the report also

498    presents SDG Dashboards, with each goal coloured as "green," "yellow," or "red",

499    indicating whether the country has already achieved the goal (green), is in a "caution

500    lane" (yellow), or is seriously far from achievement as of 2015 (red). Results

501    demonstrate that Spain faces major challenges - as indicated by a red rating - in meeting

502    nine of the SDGs, and it is only on a good path towards reaching SDG 5 on gender

503    equality. The greatest challenges exist for climate change (SDG 13), ecosystem

504    conservation (SDGs 14 and 15), and sustainable consumption and production (SDG 12),

505    although red rating in specific indicators included in other goals emphasizes other acute

506    challenges. For instance, an unemployment rate of 22.4 % places Spain in the

507    unenviable position of tenth to last in the ranking (SDG 8), and it also ranks in the

508    lowest positions in relation to the net Official Development Assistance (ODA) as of the

509    GNI (SDG 17).

510       Spain is obliged to contribute to the implementation of the 2030 Agenda in

511    developing countries. For this purpose, besides the issue of increasing the level of ODA,

512    it should also rethink development cooperation as a state policy, strengthen the technical

513    capacities the Spanish Agency for International Cooperation for Development

514    (AECID), and focus action in least developed countries to provide them with basic

515    services, particularly for children and women.

516       Finally, the role of local governments should be promoted, as decentralised

517 governments seem to be better placed to shape viable policies that respond to the need

518 and aspirations of local people and, for instance, are more likely to conceive and

519 implement pro-poor policies. Interestingly, various examples exist in Spain of

520 Autonomous Governments defining a local agenda to meet the SDGs (Generalitat

521 Valenciana, 2016), (Generalitat de Catalunya, 2016).

522

523 **3.2. India**

524       India appears to be preparing well for commitment towards the SDGs. The

525 reflections can be easily traced in the planning documents of both federal government as

526 well as most of the provincial governments. Different organisations from different

527 sectors, including corporate houses, government departments, civil society

528 organizations, academic institutions, amongst others, all are gearing up towards aligning

529 activities to SDG targets. However, there are a number of context specific challenges in

530 the process.

531      Based on the SDG Index (Sachs et al 2016), India ranks 110 out of 149 countries

532 included in the study, and results indicate that this country faces several challenges

533 related to the majority of the SDGs. More specifically, population growth is one of the

534 more challenging areas. Sekhawat (2015) observes that if India's population reaches 1.7

535 billion by 2050, as estimated by UN, the country is likely to face a widening ecological

536 deficit even if its current per-capita levels of resource-consumption remain the same.

537 This is important to note that the population growth will also be a challenging area for

538 social and economical sustainability, as it can adversely hit most of the development

539 programs.

540  Another important issue links to governance. India has a federal government and

541 two provincial governments. Provincial governments may not be from the same

542 political party that forms the federal government. Sometimes, due to a difference in

543 political ideologies and interests, the development work suffers. Further, the provincial

544 level governance, in some cases, has also been blamed for less transparency in the

545 development related projects.  The corruption has been one of the major challenges in

546 the country. The corruption takes most of the resources from development channels to

547 individual hands. The nexus between political leaders, corporations and bureaucracy is

548 often blamed for rising corruption in the country, which affects the development work

549 both qualitatively and quantitatively. However, the increasing young population, which

550 is a strong source of social capital, is actively coming forward to change the corrupt

551 system with more transparent and reliable governance (Kattumuri, 2015). Also, in the

552 future the corruption is likely to be reduced, as the current federal government appears

553 to be working strongly against this.

554  At a micro level, the SDG implementation requires awareness and capacity

555 building programmes in this area. Many of the executives, both in the public sector and

556 private sector, still view the SDGs mainly as environmental sustainability initiatives.

557 Therefore, there is a great need to harmonize and integrate all of the three dimensions in

558 SDG implementation capacity building programmes. Despite the challenges, the

559 country is moving well in the direction of achieving the SDGs. With commitment and

560 clarity, it is expected that India will be making significant progress in SDG

561 implementation in times to come.

562

563

**3.3. Serbia**

Serbia was actively involved in the global process of prioritizing goals for the future, as one of 56 countries participating in the campaign "The World We Want". "The Serbia We Want" campaign was initiated in 2013, involving over 250 000 people in consultations, with 28 000 people actively participating through the web portal (www.srbijakakvuzelim.rs), social networks or direct consultations (focus groups, workshops, interviews). As a result of the consultations, nine priorities for post 2015 development were recognized and grouped into three following tiers:

1: More and better jobs and decent employment; Eradication of poverty and better support to vulnerable groups; Good governance and reliable institutions.

2: Culture of responsibility, tolerance and solidarity (culture of social cohesion); Better quality of education; Better healthcare.

3: Sustainable environment; Equality between women and men; Better management of migration and population mobility. (UN Serbia, 2013)

The Republic of Serbia took part in the adoption of the 2030 Agenda for Sustainable Development, as a member of the UN Economic and Social Council - ECOSOC (for the period 2014-2016) and of the Open Working Group, as well as of the Intergovernmental Committee of Experts for financing Sustainable Development. At the end of 2015, the Government of Serbia adopted the Decision on the establishment of the Interdepartmental Working Group for the implementation of the 2030 Agenda for Sustainable Development, with responsibility for monitoring and implementation of the Agenda and all goals and objectives (http://www.mfa.gov.rs).

Further steps in implementation of the goals need to be supported by accurate data, well-developed evaluation and monitoring models and quality coordination

588    between institutions. According to the SDG Index (Sachs et al, 2016), Serbia takes 39th

589    position on the list of 149 countries; as shown by the SDG Dashboard, the major

590    progress has been achieved previously in the following areas: eliminating poverty (SDG

591    1), provision of clean water and sanitation (SDG 6) and reducing of inequalities (SDG

592    10); SDGs 2,3,4,7,9,11 and 17 are colored "yellow", which means that it is partially

593    achieved, whilst the others are red – meaning that there is still a long way to its

594    achievements. SDG 14 has been excluded for Serbia, since there is no sea within its

595    borders. Within SDG 12, waste-water treatment has been marked red, as well as the

596    $CO_2$ emissions from the energy in Serbia within SDG 13. Among environmental

597    challenges there is also the issue of complete protection of terrestrial sites (SDG 15),

598    while the government efficiency rate makes a key challenge among the indicators of

599    achievement of SDG 16.

600

601    **4. Discussion - Lessons Learned**

602    The diversity of examples and perspectives from the case studies allow the

603    identification of some lessons learned. These are as follows:

604        **a) Inclusiveness: no one must be left behind.**

605          The SDGs focus strongly on reducing inequality, with many goals designed

606          to 'leave no one behind'. Therefore, the SDGs universally apply to all, and

607          countries from both developed and developing countries will need to mobilise

608          efforts to achieve the SDGs. A paradigm shift is advocated to define the poor

609          and approach the most vulnerable segments of population. The pledge that 'no

610          one will be left behind' therefore requires a focus on the poorest and most

611          vulnerable people to reduce their exposure and vulnerability to climate-related

612  extreme events and other economic, social and environmental shocks and

613  disasters.

614

615  **b) The need for improved cooperation and stronger alliances between the**

616  **public sector, the private sector and civil society.**

617  Throughout the case studies it can be seen that there is a growing awareness of

618  the challenges in achieving the SDGs amongst citizens, including vulnerable

619  groups; when asked, people are ready to provide inputs and be more active in

620  finding solutions to the socio-environmental problems they face. A variety of

621  issues related to political changes, migration or poverty are all interrelated,

622  affecting the implementation of the SDGs in the three countries used as case

623  studies, and beyond. A greater coordination of the works undertaken by the

624  different sectors is needed, in order to make progress in achieving sustainable

625  development. At present, the Encyclopedia of the Sustainable Development

626  Goals, currently on preparation, congregates around 1.700 sustainability experts

627  from academia, government and NGOs working on sustainable development.*

628

629  **c) The need for Governance, Indicators and a Monitoring Framework for**

630  **the implementation of the Sustainable Development Goals**.

631  The experience of the MDGs underscores the importance of good governance,

632  and outlines the need for using adequate indicators as early as possible

633  (Sustainable Development Solutions Network, 2015). Indeed, indicators will be

634  (*) Details can be seen at: https://www.haw-hamburg.de/en/ftz-

635  nk/publications/encyclopedias/sdgs.html

636

637      the backbone of the monitoring progress towards achieving the SDGs at the

638      local, national, regional, and global levels. One lesson learnt from the MDGs is

639      that we cannot manage what we do not measure, and what gets measured is far

640      more likely to get done. It is therefore necessary to identify and apply specific,

641      measurable and action-oriented indicators to turn the SDGs and their targets into

642      a management tool to help countries develop implementation strategies and

643      allocate resources accordingly (Sustainable Development Solutions Network,

644      2015), (Hák et al, 2016). In addition, a report card based on a reduced set of

645      reliable indicators will allow them to measure progress and help ensure the

646      accountability of all stakeholders for achieving the SDGs. However, it will take

647      many years before the official SDG indicators framework will be underpinned

648      by comprehensive data (Sachs et al, 2016).

649

650      **d) The need for increased accountability**: A crucial element to promote and

651      accelerate the SDG results will be citizens holding governments and donors

652      accountable. The raw material for accountability is high-quality data providing

653      the right information on the right things at the right time (Independent Expert

654      Advisory Group on a Data Revolution for Sustainable Development, 2014), and

655      especially data on public spending and revenue/aid in budget-related documents

656      will allow civil society to track increases in 'means of implementation' for the

657      SDGs (Martin and Walker, 2015).

658

659     **e) Improved financing mechanisms**: The success of the SDGs will need

660     countries worldwide to invest adequately in addressing their challenges. The

661     investments for sustainable development will not be heavy globally speaking,

662     certainly not compared with the massive costs if no investment is made (Sachs,

663     2012). Moreover, failing to tackle inequality will add hundreds of billions of

664     dollars to the spending needed to end poverty: failure to tackle inequality will

665     mean failure to deliver the SDGs (Martin and Walker, 2015). Sachs (2008)

666     estimated that meeting the major goals of poverty reduction; biodiversity

667     conservation; climate change mitigation, and primary health for all would need

668     perhaps 2–3% of global income (Sachs, 2008).

669

670 **5. Conclusions**

671 The aim of this paper has been to explore the linking process between the SDGs and the

672 need to provide a better understanding of the current and emerging challenges in respect

673 of sustainable development. This is needed, since there is otherwise a risk of investing

674 much time and resource in trying to implement the SDGs without addressing the

675 existing and still open sets of questions on how best to pursue sustainability. The paper

676 has demonstrated that the process of implementation of the SDGs offer unrivalled

677 opportunities, as well as many challenges, which need to be met in advancing equal

678 opportunity and fostering economic empowerment, which in turn may help to address

679 problems related to discrimination and ignorance, which perpetuate poverty and restrict

680 growth. The extent to which the SDGs will be supported by investments in education,

681 infrastructure and scientific and technological research and hence be able to lead to

682  tangible results in the medium and long term, helping developing countries to overcome

683  the many barriers seen in the transition process, is a point in need of further study.

684

694

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