**Preliminary findings of the visit to the Republic of Zimbabwe by the Special Rapporteur on the negative impact of unilateral coercive measures on the enjoyment of human rights**

Harare (28 October 2021), the United Nations Special Rapporteur on the negative impact of unilateral coercive measures on the enjoyment of human rights, Prof. Alena Douhan, visited Zimbabwe from 17 to 28 October 2021. The purpose of the visit was to assess the impact of unilateral sanctions on the enjoyment of human rights by people living in Zimbabwe and other affected people.

These observations are of a preliminary character, and the result of extensive consultations with a wide range of interlocutors. The full report will be presented to the United Nations Human Rights Council in September 2022.

The Special Rapporteur met the President of Zimbabwe; the Speaker of Parliament; the Chief Justice; and the Governor of the Reserve Bank; the Chief Secretary to the President, and the Ministers of Foreign Affairs and International Trade; of Justice, Legal and Parliamentary Affairs; of Finance and Economic Development; of Defence and War Veterans Affairs; of Women and Small and Medium Enterprise Development; of Higher Education, Science and Technology Development; of Environment, Tourism and Hospitality Industry; of Mines and Mining Development; of Home Affairs and Cultural Development; of Youth, Sports, Arts and Recreation; of Information, Publicity and Broadcasting Services; of Industry and Commerce; of Local Government and Public Works; of Energy and Power Development; of Public Service, Labour and Social Welfare; of Lands, Agriculture, Water, Climate and Rural Resettlement; of Primary and Secondary Education; of Transport and Infrastructural Development; of Health and Child Care; as well as the Provincial Minister of Harare; the Human Rights Commission of Zimbabwe, the University of Zimbabwe, Warren Park Secondary School, and Sally Mugabe Central Hospital.

She also met the UN Country team; members of various political parties; independent civil society organizations, women’s rights activists and human rights defenders; faith-based organizations; trade unions; business, small and medium-sized enterprises; employers and bankers associations; members of diplomatic community; medical personnel, university professors, independent researchers, and school teachers.

The Special Rapporteur also had the opportunity to visit Bulawayo and met its Provincial Minister, as well as representatives of the private sector, the health sector, the school and higher education sector, as well as representatives of political parties.

She also conducted visits to the National Railways of Zimbabwe and the Bus Corporation of Zimbabwe, which allowed to gather first-hand information on the impact of over-compliance with sanctions.

The Special Rapporteur extends her gratitude to all these interlocutors who have generously offered their time, information, analysis, experiences and thoughts to help her understand in a short time what has proved to be a very complex and alarming situation.

Although the Special Rapporteur had the opportunity to meet many representatives of independent civil society organizations and human rights defenders, she notes with regret that a substantial number of NGOs and some other interlocutors failed to engage with the mandate due to various hateful and intimidating messages that appeared in social media and news outlets, and an alleged fear of losing foreign donations. The Special Rapporteur reiterates her invitation to all interlocutors to share their views and experience on the impact of unilateral sanctions on the enjoyment of human rights in Zimbabwe, ahead of the final report.

The Special Rapporteur commends the warm welcome and the constructive and cooperative way in which the Government facilitated her visit, which enabled a frank and open dialogue. She expresses particular thanks to the Ministry of Foreign Affairs for its efficient engagement with her office. She also thanks the United Nations Resident Coordinator’s office for its support throughout the visit.

## Contextual background

U.S. sanctions against Zimbabwe began in 2001 by blocking its access to funds from international financial institutions. This was eased in 2018 to allow access to funds for social programmes. U.S. targeted sanctions were introduced in 2003 by blocking property and interests in property of Zimbabwe officials and others accused of undermining democracy with acts that led to widespread violence. The sanctions were broadened in 2005 and 2008 to ultimately cover senior officials and entities accused of undermining democracy or providing support toward that end, family members of sanctioned individuals, state-controlled entities and persons accused of human rights abuses linked to repression and corruption. The sanctions currently target 83 individuals and 37 entities. Many targeted individuals and companies are involved in key economic sectors.

The European Union imposed sanctions against Zimbabwe in 2002, citing human rights abuses; these included an arms embargo and targeted financial sanctions (asset freezes). At its peak, the targeted sanctions listed 95 individuals and 9 entities. Most listings were suspended in 2013 after a referendum on a new constitution, and in 2014 the EU revived direct development cooperation that had been suspended since 2002. In 2021, the EU, citing a deteriorating humanitarian situation and human rights violations, prolonged its arms embargo and its asset freeze against one state-owned company, Zimbabwe Defence Industries, in connection with alleged human rights abuses by security forces.

In January 2021, amid Brexit, the UK listed four Zimbabwe individuals and one entity under its own sanctions to encourage democratic principles and the rule of law, a halt to repression and compliance with human rights law. One individual is designated under a UK anti-corruption regime.

Australia imposed an arms embargo as well as financial sanctions and travel bans against political leaders and other persons in Zimbabwe in 2002, citing human rights abuses and disrespect for the rule of law. In 2013, after the constitutional referendum, it lifted many of these sanctions but the arms embargo and sanctions against some individuals and entities have remained in force.

Switzerland imposed an arms embargo against Zimbabwe and froze the assets of President Robert Mugabe and close associates in 2002, citing human rights violations. One aim was to prevent Swiss financial institutions from being used to circumvent other states' sanctions against Zimbabwe. The Swiss sanctions were lifted in 2013 when Zimbabwe adopted a new constitution, except for sanctions against Mugabe and his wife (she was delisted in 2020 after his death in 2019) and against Zimbabwe Defence Industries.

Canada imposed an arms embargo and targeted sanctions against government officials and others in Zimbabwe in 2008, citing an escalation in human rights violations and increased political repression. In 2020, Canada said the sanctions will remain in force until there are "positive shifts in Zimbabwean policy that result in improvements in human rights, democracy, freedom and the rule of law."

## Economic and humanitarian situation

**Health:** Despite some improvement, health services remain poor amid a deteriorating infrastructure, a lack of funding and shortages of all types of health care necessities, including medical equipment and medicines. Much equipment in place is obsolete. There is also an insufficiency of medical staff and training, with vacancy rates of over 50% for doctors, midwives, laboratory and environmental health staff.

**Food**: Zimbabwe's humanitarian crisis continues with persistent climatic and economic shocks, with 7.1 million people estimated to be food insecure in 2020. Poor rainfall and erratic weather patterns have harmed crop output. According to the Special Rapporteur on the right to food, who made an official visit to Zimbabwe in

2019, obstacles to enjoying this right stem from *the agriculture and land system, land redistribution, poor agricultural productivity, climate change, droughts and floods, and economic sanctions and conditionalities.*

**Industry:** Zimbabwe's economy comprises three main sectors: services, agriculture and industry. Services accounted for 60.6% of GDP in 2017, while the industrial sector contributed 26.9% and agriculture accounted for 12.5%. Major industries include mining, cement, clothing and footwear, and wood products; each of them faces equipment degradation and deficits of qualified labour.

**Education:** The education system consists of primary education for children 3-12 years old, secondary education for those 13-18 years old, and tertiary education (universities or specialized schools) for students 19-23 years old. Enrolment rates, based on the most recent data, were 72.5% for children 4-5 years old, 97.3% for children 6-12 years old, 52.4% in secondary education and 8.9% in tertiary education. The literacy rate of the population 24 years old and above was 88.7%.

**Internet access:** According to the World Bank, about 25.1% of Zimbabwe's population used the Internet in 2019. A sharp rise in 2009-2015 has slowed considerably, with hardly any rise in 2019. This contrasts with an accelerating expansion of the Internet infrastructure since 2016, as measured by secure servers.

**Water and sanitation:** Government spending on water, sanitation and hygiene has increased, but urban-rural disparities remain and rural communities still have limited access to basic drinking water services. In 2019, 77.1% households in Zimbabwe had access to improved sources of drinking water. Expanding urbanisation and informal settlements have given rise to unsanitary and unhygienic conditions that increase the risk of disease and water contamination.

**Environmental protection:** The government aims to protect the environment and promote sustainable resource production; however, it also plans to expand the mining sector to promote economic development by re-opening closed mines, developing new mines and increasing domestic mineral processing, all of which can produce land degradation, pollution and toxic waste. A 2002 law to better organize environmental management and enforcement has had limited success; a key problem cited is the lack of sufficient funds.

**Transportation:** Zimbabwe has heavy road traffic deaths (6.46% of all deaths in 2018, according to WHO data) due largely to poor roads and the poor condition of cars. In June 2021, the government said roads and bridges around the country urgently needed reconstruction. Most imported automobiles are used ones, many with defects. The railway network is mostly managed by National Railways of Zimbabwe; between 2009 and 2019, its operating capacity plunged as tracks, signals and telecommunication systems deteriorated amid a lack of maintenance, attributed to financial constraints. Rehabilitating the network is a current priority. Zimbabwe has six international and four large domestic airports, plus many small ones, often without paved runways. Two international airports are being upgraded. The national carrier, Air Zimbabwe, has had intermittent serious financial trouble.

In 2001, official development assistance allocated to Zimbabwe dropped to a historic low of about 160 million USD. As Western humanitarian and development aid gradually declined, the country also experienced an exodus of private businesses. Zimbabwe was thus abandoned to its own mercy, unable to access international aid and financing for many years, and it was expelled from the global financial markets. Approximately 80% of international financial operations from Zimbabwe are in US dollars and require clearance by the US Office of Foreign Assets Control (OFAC), while the remaining 20% are in euros and yen.

In terms of **access to credit,** the price of loans for Zimbabwe is reportedly 7% due to risk perceptions and over-compliance; the average is 0.5% in other countries. Most commercial loans are for less than 10 years. The IMF classifies Zimbabwe "in debt distress" with large and longstanding arrears to international financial institutions and commercial creditors. By the end of 2018, Zimbabwe had accumulated more than 8 billion USD in foreign debt and about 6.9 billion ZW dollars in domestic debt. In August 2021, the IMF allocated 961 million USD in special drawing rights, of which 500 million will be used to support its currency and the rest for Zimbabwe's COVID-19 response. No funds will be used to alleviate its debt. It is reported that since 2001, Zimbabwe might have lost access to more than 100 billion USD in bilateral donor support, international commercial loans, and grants and loans from the IMF, the World Bank and the African Development Bank. Due to this, Zimbabwe had a reported 34 billion USD funding gap in infrastructure financing in 2017. The inability to generate additional revenue and the country's poor economic performance has limited the government's ability to provide basic social services.

**Humanitarian aid** is reported to be provided by a number of interlocutors including the United Nations agencies, the United States of America, the United Kingdom, the European Union, Japan and other international actors in cooperation with the Government of Zimbabwe and aimed in the first instance at humanitarian relief.

**Assessment of the legal basis for imposition of sanctions:**

The Special Rapporteur stresses that under international law unilateral measures without or beyond authorization of the UN Security Council may only be taken when they comply with states' international legal obligations (retortions) or in the course of countermeasures in accordance with the rules of law of international responsibility: to be applied against states for violations of international legal norms, to aim to restore the fulfillment of international obligations, to be proportional to the breach occurred, to be necessary, and to not violate fundamental human rights.

Unilateral sanctions imposed against natural and legal persons in Zimbabwe as well as secondary sanctions and extensive over-compliance by banks and third-country companies raise serious concerns about their correspondence with international legal standards.

In particular, while recognizing that states may freely vote in international organizations in line with their foreign policies, the Special Rapporteur notes that instructions of ZIDERA to the US executive directors of international financial institutions to oppose extending any loan, credit, or guarantee to the Government of Zimbabwe; or to cancel or reduce debts owed by the Government of Zimbabwe to the United States or any international financial institution unless the President certifies otherwise, do not correspond to the purposes of article 1(ii-iv) of the Articles of Agreement of the International Monetary Fund – to promote international monetary cooperation; to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy; to promote exchange stability, and to maintain orderly exchange arrangements among members. This approach turns *ad hoc* decisions into nearly automatic denials, especially in view of the US possibility to block the IMF's decisions.

The Special Rapporteur considers that the state of national emergency announced by the U.S. Government on 7 March 2003 in Executive Order 13288 as the ground for introducing sanctions against Zimbabwe, and repeatedly extended, does not correspond to the requirements of art. 4 of the International Covenant on Civil and Political Rights, such as the existence of a threat to the life of the nation, the limiting of measures to the exigencies of the situation, a limited duration, and the absence of discrimination, as referred to in the Communication of human rights experts of 29 January 2021.

The Special Rapporteur is concerned that existing unilateral targeted sanctions as a punitive action violate, at the very least, obligations arising from universal and regional human rights instruments, many of which have a peremptory character – procedural guarantees and presumption of innocence with a view that the grounds for their introduction do not constitute for the most part international crimes or comply with the grounds for universal criminal jurisdiction. The designation of family members of listed individuals contradicts the prohibition on punishment for activity which does not constitute a criminal offence and constitutes collective punishment prohibited by international human rights law.

The Special Rapporteur underlines that the listing of the majority of high state officials, and the possibility to designate property or companies they own or control, affect nearly all economic sectors. Imposing high fines on companies and banks for dealing with designated individuals or property they control, based on payments in US dollars, results in increasing reputational risks and the adoption of zero-risk policies by US and third-country nationals or companies as part of over-compliance.

The Special Rapporteur reminds that "targeted sanctions" cannot, in practice, be isolated from the negative consequences on Zimbabweans of secondary sanctions, civil and criminal penalties for circumvention of sanctions regimes, zero-risk policies and over-compliance. The cumulative effect of these is an important factor undermining the capacity of the Government of Zimbabwe to exercise its duty to maintain the functioning of critical infrastructure, to achieve Sustainable Development Goals, and to ensure the enjoyment of fundamental human rights.

The Special Rapporteur underlines that applying extraterritorial jurisdiction to nationals and companies of third states for cooperation with Zimbabwe's public authorities, nationals and companies, and alleged threats to such third-state parties, is not justified under international law and increases the risks of over-compliance with sanctions.

The Special Rapporteur reminds on the inadmissibility of applying sanctions extraterritorially on the basis of using payments in US dollars as a ground for expanding jurisdiction.

## Impact of unilateral sanctions on the enjoyment of human rights

Due to the lengthy period of imposition of unilateral sanctions it is complicated to identify their exact impact on the situation in the country as it is affected by a vast number of elements. Unilateral sanctions, secondary sanctions and over-compliance in their complexity have exacerbated the pre-existing economic and humanitarian crisis, inhibiting the building of essential infrastructure and international and inter-institutional cooperation necessary for the achievement of the Sustainable Development Goals.

The designation of senior state officials as well as companies owned or controlled by them makes foreign companies and banks unwilling to do business with Zimbabwe's public sector, preventing the Government from getting revenue for the exercise of its public functions and provision of essential services, resulting in the violation of labor and social rights of people involved in the public sector, whose salaries are reported to be much lower than in the private sphere; this has led to rising unemployment, especially among the most qualified professionals (engineers, doctors, teachers, university professors, judges, police officers), which at times is reported to reach 30-50 per cent.

It has also prevented the Government from using resources to develop and maintain essential infrastructure, disaster response plans and for social support programs, which has a devastating effect on the whole population of Zimbabwe, especially those in extreme poverty, women, youth, children, medical workers, and people with disabilities or life-threatening or chronic diseases, particularly in rural areas. It is reported that credit lines are periodically opened and humanitarian assistance provided for meeting urgent humanitarian concerns (HIV, cholera, COVID-19), but less – for development projects.

The stated readiness to impose secondary sanctions, and criminal and civil penalties against natural and legal persons circumventing unilateral sanctions regimes, and the imposition of high fines on Zimbabwean banks (CBZ, Standard Chartered Bank Zimbabwe, Barclays Bank) have resulted in Zimbabwe being qualified as a high-risk country, the adoption of zero-risk policies and the departure of 87 correspondent banks from Zimbabwe. Over-compliance by third-country banks and private companies has resulted in growing problems to transfer or receive money when natural or legal persons of Zimbabwe are participants in the transactions, including freezes on money in Zimbabweans’ bank accounts, closing long-established bank accounts (reportedly in the U.S., UK, Switzerland); extending the length and costs of bank transfers, and the need to do transactions via third-country nationals.

Unilateral sanctions against natural and legal persons of Zimbabwe, in conjunction with secondary sanctions, zero-risk policies and over-compliance are exacerbating the economic and humanitarian crisis, forcing the Government of Zimbabwe, banks, public institutions, private companies and individuals to look for alternative ways to participate in international trade by involving third parties, using alternative informal non-transparent mechanisms of trade and payments, thus adding to corruption rather than suppressing it, preventing the participation of Zimbabwe and its people in international cooperation, adding to the isolation of the country, impeding Zimbabwe’s achievement of the Sustainable Development Goals, and undermining the right to development of the people of Zimbabwe.

Preventing Zimbabwe from participating in international cooperation by impeding its ability to pay membership fees for international organizations, or to have interparliamentary cooperation, isolates Zimbabwe from international cooperation and prevents the fulfillment of the right to development.

The Special Rapporteur notes with concern that due to the unavailability of new machinery and spare parts, the emigration of competent staff and the unavailability of financial resources for medical expenses, the people of Zimbabwe have limited access to public transportation, electricity, water and health care, affecting besides economic and social rights the rights to health and to life, especially in the course of the pandemic. The same reasons impede access to safe drinking water and sanitation, resulting in increasing risks of cholera, COVID-19 and other diseases.

The negative impact of unilateral sanctions is exacerbated multiple times by the de-risking policies of banks, donors, and trade and cooperation partners, resulting in over-compliance, reportedly impeding the possibility of citizens of Zimbabwe and private businesses to participate in international cooperation and professional or sports training and exchanges – affecting thus the right to education and the possibility of professional growth; by preventing the flow of investments to Zimbabwe because of high reputational risks, the number of working places is negatively affected, resulting in external migration and involvement in the informal economy.

The Special Rapporteur is concerned that the use of extraterritorial secondary sanctions and reported fear of sanctions result in over-compliance with existing sanctions regimes, preventing the Government of Zimbabwe, its public sector and private companies from purchasing machinery, spare parts, medicine, food, agricultural supplies and other essential goods, and also result in a growing number of bank transfer refusals and difficulties for transfers that can occur, resulting in rising prices for all (especially imported) goods.

Insufficient resources, the limited availability of technical aid, and delays in building essential infrastructure including hospitals, schools, transport, electricity, agriculture, courts, and recruitment of qualified professionals, result in the unavailability of medical aid, food insecurity and poverty, affecting the quality of work of public institutions and resulting in the violation of terms and quality of public services including investigations and court hearings, giving rise to crime and corruption and affecting therefore the right to health, to education, to due process guarantees and many others.

The Special Rapporteur notes with concern that the lack of resources, limited access to development loans, and reluctance of foreign entities to deal with Zimbabwean partners or invest in the economy makes it hard and expensive to buy necessary medical and technological equipment, reagents and spare parts for the repair and maintenance of water, public transport, telephone and communication systems, schools, hospitals, houses and other public services; and to implement development projects including those approved by UNIDO and other organizations, thus undermining the enjoyment of many human rights, including the right to a decent life.

Low salaries, unemployment and growing involvement in the informal economy result in migration to neighboring countries, rising poverty, involvement in criminal activities, corruption, prostitution, human trafficking, sexual exploitation and drug abuse, especially among the most vulnerable, including women, youth and children.

The Special Rapporteur notes that poverty, insufficient resources, the use of third-country partners and banks often in non-transparent procedures, which is also due to the impact of unilateral sanctions, fear of secondary sanctions and de-risking policies, as well as the unavailability of technical assistance for institution-building, traditionally give rise to crimes and corruption and undermines the institutions and values of democracy, ethical values and justice; it jeopardizes sustainable development and the rule of law, as defined in the preamble and art. 9(1) of the UN Convention against Corruption of 2003.

The Special Rapporteur underlines that low salaries and reduced Internet access result in the impossibility to pay tuition fees and growing school and university drop-out rates, the emigration of teachers and university professors and the reduction of the number of schooling hours, endangering thus the exercise of the right to education. The reported reluctance of foreign partners to cooperate with Zimbabwean educational institutions, sport societies and private companies, as well as impediments to money transfers, difficulties in getting visas, the reported ineligibility or limited eligibility of Zimbabwean students and scholars for research grants and scholarships affect the right to education as well as international academic, sports and cultural cooperation, innovation, academic freedoms and cultural rights.

The impossibility to buy equipment, raw materials and spare parts directly from producers and the impediments to bank transfers prevent the involvement of Zimbabwean companies of all sizes (including those organized by and for vulnerable population groups: people with disabilities, women in rural areas involved in folk crafts), and agriculture and the mining industry in international cooperation, and result in substantial declines in their revenues, leading to poverty, the violation of the right to food, right to health, right to life, and economic and cultural rights.

The same reasons have been reported to create a substantial (6 months – 2 years) backlog in manufacturing IDs and passports, affecting therefore the right to the recognition of the personality, which limits access to the rights to education, to work, to social guarantees and to healthcare. Besides that, the unavailability of credit and foreign investment, over-compliance by banks; higher costs and longer durations of bank transfers, impediments in the delivery of essential equipment and spare parts, and under-developed and deteriorating infrastructure affect tourism and prevent the implementation of environmental protection and sustainable development projects.

They also result in rising emigration from Zimbabwe, primarily of males and qualified youth (up to 5 mln people), affecting rights of the workers as well as of those of women and children left without stable incomes.

**Recommendations**

The Special Rapporteur reminds all parties of their obligation under the UN Charter to observe principles and norms of international law, including principles of sovereign equality, political independence, non-intervention in the domestic affairs of states, and peaceful settlement of international disputes. She welcomes the decisions of the European Union and Switzerland to minimize the number of active targeted sanctions to zero and calls on the United States, United Kingdom, Canada and Australia to review and lift sanctions on natural and legal persons of Zimbabwe in accordance with principles and norms of international law and human rights law.

The Special Rapporteur urges all stakeholders at the international and national levels to stop using the rhetoric of sanctions as an advocacy tool, and to engage in structural dialogue to settle any disputes in accordance with the rule of law. She stresses that the Sustainable Development Goals can only be achieved in the spirit of solidarity and cooperation between countries.

She reminds that any unilateral measures may only be taken when they duly comply with states' international legal obligations (retortions) or are applied in the course of internationally lawful countermeasures. She also reminds that no good intention justifies the violation of fundamental human rights as "collateral damage."

The Special Rapporteur urges all interlocutors (including states, international organizations, banks, private companies and civil society) to avoid coercion, written or oral threats or any other act which may cause or result in over-compliance, and to interpret all limitations in the narrowest possible way in the interim period before the lifting of unilateral sanctions.

The Special Rapporteur urges the U.S. Government to cease the state of national emergency regarding Zimbabwe that is not in accordance with the norms of the International Covenant on Civil and Political Rights, and to bring national legislation into accordance with international law, including human rights law, refugee law and the law of international responsibility.

The Special Rapporteur calls on banks and private companies to behave in accordance with the Guiding Principles on Business and Human Rights to avoid over-compliance and the consequent violation of rights of nationals and residents of Zimbabwe. The Special Rapporteur also reminds on the obligation of all states and regional organizations to comply with the principle of due diligence and to take all necessary measures to guarantee that activity under their jurisdiction and control won't affect the human rights of people in the country and beyond national borders.

While welcoming certain legislative and organizational steps taken by Zimbabwe to suppress corruption, the Special Rapporteur calls on the Government of Zimbabwe to implement systematically its program to achieve that objective, enabling the effective functioning of the anti-corruption commission and the system of anti-corruption courts, and proceeding with complex and verifiable investigations. She amplifies the fact that unilateral sanctions introduced allegedly to minimize corruption in practice result in its growth because of the impossibility to do direct bank transfers, need to involve third parties and use non-transparent mechanisms.

While welcoming humanitarian support provided to Zimbabwe by donor states, the Special Rapporteur reminds on the need for pro bona involvement of all interlocutors, governmental, non-governmental and international, to rebuild Zimbabwe's capacity to restore essential infrastructure and public services to enable the Government to implement its duty to take all necessary means to achieve the Sustainable Development Goals on elimination of poverty and hunger, in the sphere of health, nutrition, labor, social guarantees, education, access to Internet and elimination of corruption.

While recognizing the devastating consolidated effect of unilateral sanctions and over-compliance on the right to development of the Zimbabwean people and also on the rights to food, to health, to education and labor rights, the Special Rapporteur calls on the Government of Zimbabwe in cooperation with the Office of the High Commissioner for Human Rights and the UN Country Team to implement fully the cooperation agreement signed between them and to organize visits of relevant Special Procedures to the country.

The Special Rapporteur calls on UN agencies and organizations, in cooperation with relevant humanitarian organizations, to organize monitoring of the negative humanitarian impact of unilateral sanctions within their respective spheres of interest.