UNEP

# GREEN economy

## Policy Brief

# Fiscal reforms in the extractives sector for green finance

## Mobilizing public finance for the SDGs

According to UN estimates, some USD 5-7 trillion is needed annually to achieve the SDGs.[1] This requires the mobilisation and effective use of all available sources of financing. Among the options available, domestic public revenues will be a particularly important source of financing which can create fiscal space for sustainable budget expenditures, reduce dependency on development assistance, and leverage private investment to support delivery of the SDGs.[2]

Resource-rich countries have an opportunity to mobilize public revenues from the extractives sector to support the SDGs through green investment for instance. Well-managed extractive activities can also support economic growth, new infrastructure, technologies and jobs.[3] However, in a number of countries the scale of revenues from the extractives sector is undermined by sub-optimal fiscal regimes, weak governance structures and capacities. Moreover, externalities from extractive activities such as groundwater contamination, acid mine drainage, methane leaks from oil and gas operations, can degrade the natural environment and undermine the wellbeing of local communities. Resource-rich countries also face risks from the fall in global oil and commodity prices and declining prospects for high-carbon commodities as countries implement commitments to mitigate climate change.[4] A key challenge facing many resource-rich countries is how to mobilize and effectively use volatile revenues from resource extraction, while addressing social and environmental externalities of mining activities.

### Key messages

- A key challenge facing many resource-rich countries is how to mobilize and effectively use volatile revenues from resource extraction, while addressing social and environmental externalities of mining activities.
- Fiscal reforms can help mobilize additional public revenues from the extractives sector, alongside adequate administration capacities and governance structures.
- By pricing externalities, green fiscal policies can help reduce negative environmental and social impacts of mining activities, leverage finance from the private sector and encourage sustainable practices.
- A robust fiscal framework is needed to support transparent management and allocation of resource revenues.
- Strategically designed sovereign wealth funds (SWFs) and natural resource funds (NRFs) can channel resource revenues to support delivery of the SDGs.

## Fiscal reforms to raise revenues and address externalities in the extractives sector

Specific features of extractive activities such as long project cycles, multiple phases (exploration, development, extraction or closure), and fluctuations in global commodity prices, affect opportunities to raise revenues. Government capacities to negotiate favourable contract terms and collect revenues, governance structures, reporting, auditing and reconciliation systems among others also affect revenue prospects. These characteristics require a robust fiscal regime which ideally captures a fair share of revenues for the government, allows reasonable returns for investors and provides relatively stable and predictable revenues. In addition, a fiscal regime that is enforceable, easily administered and flexible in changing circumstances needs to be in place.[5]

Fiscal reforms in the extractives sector can help mobilise additional public revenues, for example by enhancing revenue administration, improving efficiency and effectiveness of tax systems, addressing excessive tax incentives and reducing tax evasion. These fiscal reforms should be complemented by efforts to build adequate institutional capacities, develop transparent monitoring and reporting mechanisms, and establish a system of penalties among others. Public revenues mobilised from such reforms can be substantial. For example, in Tanzania tax policy reforms and efforts to strengthen administration capacities helped increase tax revenues from 9 per cent of GDP in 2000 to 15.3 per cent in 2009; in Vietnam rationalisation of the tax policy regime and efforts to strengthen tax administration increased tax revenues as a share of GDP from an average of 19.6 per cent over 2001–04 to an average of 23.7 per cent over 2005–08.[6]

In addition to mobilising public revenues, green fiscal policies such as environmental taxes, royalties and fees, can help reduce some negative environmental and social impacts of extractive activities and create incentives for more sustainable mining practices, complementing regulatory regimes and liability provisions. For instance, to support national commitments under the Paris Climate Agreement, countries can apply a charge on carbon content at the

*UNEP defines a* ***green economy*** *as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.*

**Box 1: Green fiscal reforms in the extractives sector – Some examples from practice**

**In the UK,** an aggregates levy seeks to internalize the external costs of mining, mainly quarrying, and encourage recycling.

**In Mexico,** an annual fee is applied on gross income from gold, silver and platinum mining to raise funds to reduce environmental erosion from mining activities.

**In China,** a recent resource tax reform included a pilot scheme on water resource taxation in the province of Hebei which will be expanded to other provinces and other areas including forests, pasture and tidal zones in the future.

**In Norway,** a tax on $CO_2$ emissions from its North Sea oil industry has been applied since 1991.

point of fuel extraction, possibly as an extension of taxes already in place, to reduce greenhouse gas emissions from the combustion of fossil fuels further down the supply chain. Some countries are already using such instruments to curb harmful practices in the extractives sector and incentivize clean practices (see Box 1). While these examples are encouraging, they may not be suitable for all countries and more research is needed to understand their distributional, competiveness and environmental impacts.

In addition to fiscal instruments, other complementary measures are needed to address environmental and social impacts in the extractives sector. For example, regulations such as environmental standards can limit the impact of activities on local ecosystems. Contract provisions can also clarify legal liabilities for environmental damages in extractive sites and responsibility for financing remediation. Financial instruments such as environmental bonds can require mining companies to set aside sufficient financial resources to meet closure requirements. The effectiveness of these measures varies across countries, affected by government capacities and other factors.[7]

## Managing natural resource revenues

Revenues from extractive activities are volatile, finite, and prone to mismanagement, thus robust fiscal frameworks are needed to smooth volatile revenues over the resource horizon, integrate extractive revenues through the budget process and within a medium-term expenditure framework, create fiscal buffers and savings for future generations. This framework should be complemented by transparency initiatives such as the Extractive Industries Transparency Initiative (EITI), and accountability mechanisms such as parliamentary oversight, Supreme Audit Institutions (SAIs) and civil society monitoring, to ensure good financial governance in the sector.[8]

There are several mechanisms countries use to manage and allocate revenues from extractive activities such as spending revenues through the normal budget cycle, creating funds to address volatility and inter-generational aspects, distributing funds to citizens, spending through a state-owned extractive industry company, among others. Country approaches vary depending on national circumstances and priorities. An efficient, fair and stable resource revenue sharing system can help raise living standards and reduce poverty, provide an additional source of government finance, compensate affected areas for negative social and environmental impacts of extraction, and support peace in regions affected by resource-related violence.[9]

## Mobilizing revenues to support sustainable development: The role of Sovereign Wealth Funds (SWFs) and Natural Resource Funds (NRFs)

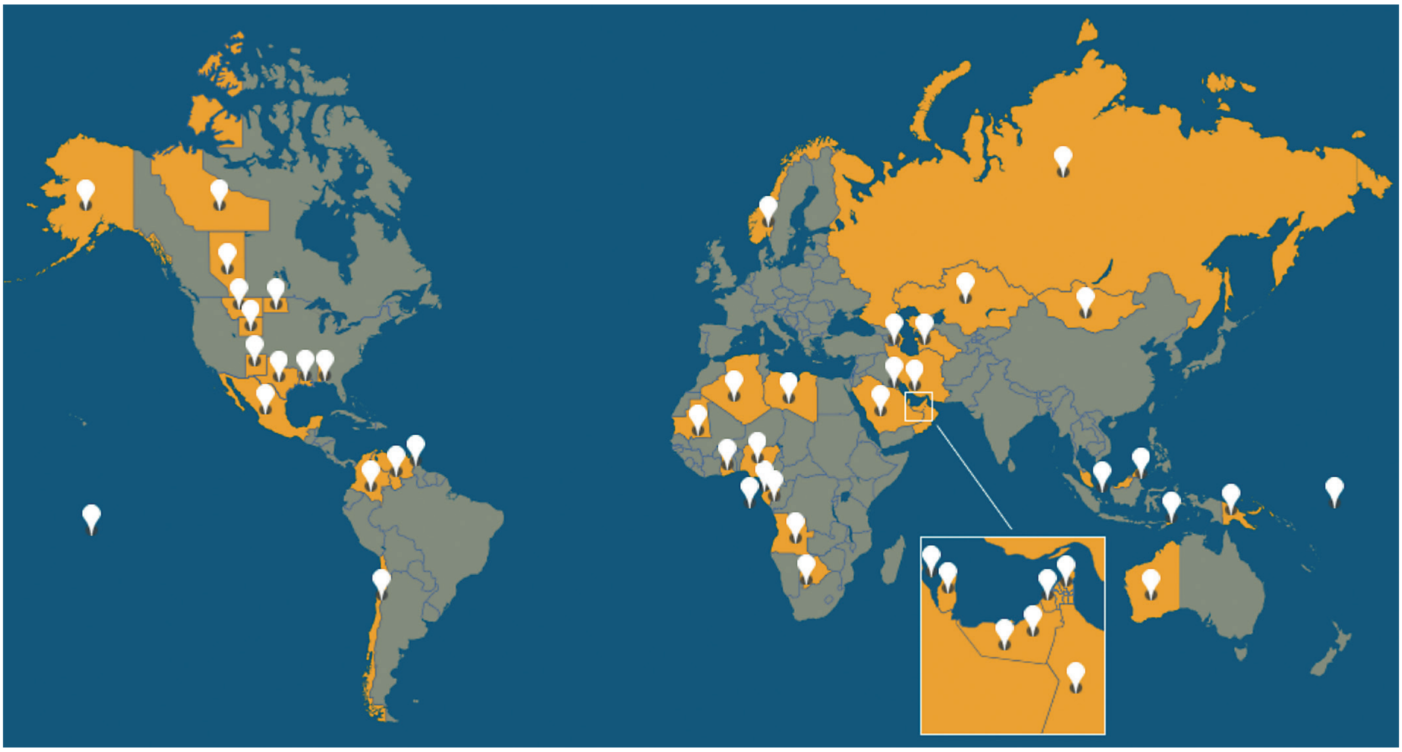
A number of resource-rich countries establish sovereign wealth funds (SWFs) as savings vehicles to manage revenues from resource extraction. Typically, SWFs are established to enhance returns on international reserves while minimizing risks over the long-term to meet pension liabilities, provide for future generations, stabilize fiscal revenues, promote economic growth and support development objectives.[10] The size and number of such funds has grown rapidly over the past decade - as of June 2016, SWFs held assets amounting to around USD 7.4 trillion.[11]

A sub-set of SWFs are Natural Resource Funds (NRFs) which are financed by natural resource revenues (from oil, gas or mineral sales).[12] NRFs have been established in a number of countries around the world and held approximately USD 4 trillion in assets as of July 2014 (see Figure 1). NRFs are used for different purposes, for example to cover budget deficits when resource revenues decline, save for future generations, support public investments, invest abroad to mitigate Dutch disease,[13] reduce spending volatility among others. However, poor governance of NRFs has created systems of patronage and nepotism in some countries.[14]

If strategically designed, SWFs and NRFs can be invested to support long-term development objectives such as the SDGs, without compromising financial returns. For example, in Chile the objectives of two SWFs include contributing to macroeconomic stability and providing public goods to provide better opportunities and improve social protection for Chileans. Ghana requires the government to use resource revenues from the Petroleum Holding Fund for development projects and Norway has a SWF which integrates sustainability considerations (see Box 2).

*UNEP launched its* **Green Economy Initiative** *in 2008, and is currently supporting over 20 countries around the world in their transition towards a green economy.*

**Figure 1: Natural resource funds in place as of July 2014**



Source: NRGI and CCSI (2014) http://www.resourcegovernance.org/natural-resource-funds

Broadening the mandate of SWFs and NRFs to include green investment can support long-term sustainable development by diversifying the economy away from hydrocarbons, tapping into burgeoning sectors such as clean technology, renewable energy, and low-carbon transport, enhancing resilience against climate change among others.[15] Moreover, the specific characteristics of SWFs make them well-suited to supporting green investments, in particular green infrastructure projects. Unlike pension funds and insurance firms, SWFs are not subject to financial regulations and have the freedom to invest in a wide range of asset classes. Moreover, many SWFs have an inter-generational nature and have a medium-to-long term investment horizon. SWFs also tend to have higher tolerance for risk, given their large scale and government backing, and can therefore pursue investments in high-risk sectors such as green goods and untested clean technology.[16] Moreover, the large size of SWFs means that shifts in their investment decisions can encourage companies to re-evaluate current business models and send signals to the wider capital market, thus helping to accelerate the transition to a green economy.[17]

Despite the potential of SWFs/NRFs as investment vehicles to support long-term green investments, limited funds have been allocated to green assets to date.[18] This reflects a number of constraints including an unstable regulatory framework, lack of government facilitation,[19] irregularity of investment due to fluctuating resource prices[20] and the concentration of SWF investment in developed economies.[21] While using SWFs and NRFs to meet domestic investment goals may risk undermining other macro-economic objectives of the fund,[22] supporting strategic domestic investments may generate higher financial returns than those available on foreign assets,[23] helping to

**Box 2: Supporting responsible investment through the Norwegian SWF**

The Norwegian Government Pension Fund Global (GPFG) is fuelled by state oil revenues and is the world's biggest SWF, worth around USD 860 billion in 2016. Since 2004, the Fund has followed ethical guidelines which seek to ensure favourable long-term returns, avoid investments that contribute to serious ethical violations and environmental damage, and active ownership to promote sustainable development and good corporate governance. Environment-related mandates have been part of the Fund's investment strategy since 2009. The adoption of new guidelines by the Norwegian parliament in June 2015 requires the Fund to pull out of mining or energy groups which derive more than 30 per cent of their sales or activities from coal. In 2015, the Fund divested from 73 companies following assessments of environmental (greenhouse gas emissions, water, deforestation), social and governance related risk factors.[24]

*The* **Green Economy Report**, *published by UNEP in 2011, makes a compelling economic and social case for investing two per cent of global GDP in greening 10 central sectors of the economy.*

boost growth in non-resource sectors and creating a virtuous cycle of increased fiscal space.[25] The process requires careful management with investments carried out through formal budget processes rather than spent directly through the fund to avoid undermining fiscal rules and circumventing accountability mechanisms like parliamentary oversight.[26]

The current context provides opportunities for these long-term investors to shift investments to low-carbon, resource-efficient assets. Such a shift is in their strategic interest. As many SWFs/NRFs are funded by revenues from extractives, future revenues are exposed to fossil fuels and other non-renewable sources. Moreover mining and drilling activities generate externalities, while many governments are adopting measures to support renewables and clean technology. Thus, prioritising green investment will help SWFs/NRFs to diversify financial risk, increase exposure to emerging sectors, and offset negative externalities. Some SWFs are starting to support green investments, for example in China, Qatar and Abu Dhabi, as a means to diversify their economies, promote sustainable development, and tap into rising demand for clean energy.[27] As we look ahead, such practices are expected to expand around the world.

## UNEP's work on fiscal policies and green finance

UNEP undertakes analysis on green fiscal policies across different sectors, such as water, energy and extractives, and provides advice to countries on how fiscal reforms can mobilise public finances for green investment, while addressing environmental and social externalities. UNEP also promotes policy dialogue by organising regional workshops and events on specific topics related to the role of fiscal policies in the transition to an inclusive green economy.

In addition, UNEP is a founding member of the Green Growth Knowledge Platform (GGKP) and co-chair of the GGKP Fiscal Instruments Research Committee. UNEP is also a founding partner of the Green Fiscal Policy Network (GFPN) which is a joint partnership together with the International Monetary Fund (IMF) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which aims to facilitate knowledge sharing and dialogue on fiscal policies to support the green economy and deliver various SDGs.

**Notes**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12 In contrast, a SWF may be financed through fiscal surpluses (e.g., from trade surpluses), pension contributions, privatisation revenues and other fiscal proceeds.

13 Where a boom in one sector, particularly natural resources, leads to an appreciation of a country's exchange rate, which in turn, has a negative effect on export sectors such as manufacturing.

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