Sindh Case Series - 3

Discussion Paper -II

Oil & Gas Resources and Rights of Provinces

A case study of Sindh

By: Naseer Memon

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Oil & Gas Resources and Rights of Provinces

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History and Background: Sindh, the southern province of Pakistan has two major regions of Hydrocarbons (i) Sindh Monocline, commonly known as Badin Block Area. It is mainly oil and gas bearing region (ii) Outside Sindh Monocline. The region includes Sukkur Rift Zone, Mazarani Fold Zone, Khirthar Depression and Karachi Depression. This region is mainly gas bearing. [1]

History of oil and gas exploration in Sindh is now almost a century old. The first well in Sindh was drilled in Khairpur by Burmah Oil Company in 1925. It did not yield any output. After the discovery of Sui (Balochistan) in 1952, northern Sindh became focused area for hydrocarbons exploration. Pakistan Petroleum Limited discovered gas in Khairpur (1957), Kandhkot (1959) and Mazarani (1959). In 1957 a huge gas reserve of 6.8 Trillion Cubic Feet was discovered in Mari by Pak-Stanvoc Petroleum Project. The same company also drilled wells in Talhar (1957), Mirpur Bathoro (1958), Nabisar (1958) and Badin. Only Nabisar showed some gas and Talhar showed some gas and oil. Burmah Oil Company drilled wells in Lakhra (1958), Badro (1958-59) and Phulji-Dadu (1958). These reserves only showed some gas. In 1961, Oil and Gas Development Corporation was established. The OGDC discovered gas at Sari (1966), Kothar (1973) and Hundi (1977).

In the same years coastal areas also witnessed drilling activity. Sun Oil Co. drilled wells at Korangi Creek (1965), Patiani Creeck (1964) and Dabbo Creek (1964). All these onshore wells went dry. Some off shore drilling was carried out by Wintershal. The company drilled Indus Marine A-1 (1972), Indus Marine B-1 (1972) and Indus Marine C-1 (1975). Husky drilled well Karachi South A-1 (1978) but no major discovery was registered. Khaskheli Oil field was a breakthrough discovery in coastal district of Badin. The discovery was made by Union Taxas in 1981. It was followed by major oil discoveries in the same area. Laghari and Mazari fields were even bigger.

The decade of 1990 witnessed major hydrocarbon discoveries in Sindh that jacked up the contribution of Sindh in oil and gas production of the country. Some major discoveries were as follows

- Qadirpur by OGDC-1990

[1] Dr. Allah Dino Memon and Imdadullah Siddiqui, Petroleum Geology and Hydrocarbon Prospects of Sindh and Pakistan: Aug 2005

- Kadnwari by LASMO (now Eni)-1990
- Miano by OMV-1993
- Sawan by OMV-1998
- Bhit by LASMO-1997
- Zamzama by BHP-1998
- Mari Deep by MGCL-1997-98

Before these discoveries, Balochistan had been the major contributor of gas in the national production.

Major Oil and Gas Field of Sindh: Table.1 and 2 below show a brief profile of major gas and oil fields of Sindh. ***Source:*** *Pakistan Energy Yearbook 2009, Ministry of P&NR, GoP*

Table.1 **Major Gas Fields of Sindh**

Units: *TCF (Trillion Cubic Feet)*

Name of the Field	Operator Company	Year	Location	Estimated Recoverable Reserves	Cumulative Production	Balance Recoverable Reserve	Heating Value (Btu/cu.ft)
Zamzama	BHP	1998	Johi-Dadu	2.324	0.765	1.55	837
Bhit	Eni Pak	1997	Sehwan	1.605	0.735	0.870	840
Mari	MGCL	1957	Ghotki	6.98	3.622	3.365	733
Mari Deep	MDCL	1997-98	Daharki-Ghotki	1.21	-	1.21	560
Kadanwari	Eni Pak	1989	Khairpur	0.490	0.366	0.124	912
Kunar Deep	ODGC	1991	Hyderabad	0.577		0.57	1029
Qadirpur	OGDC	1990	Ghotki	5.056	.974	3.082	890
Miano	OMV	1993	Sukkur	0.542	0.377	0.165	920
Sawan	OMV	1998	Khairpur	1.5	0.856	0.6444	913
Kandhkot	PPL	1959	Kashmore	1.68	0.773	0.907	835
Kandhra	PEPL		Rohri	1.72	-	1.72	150

Note: Original Recoverable Reserves of Miano and Swan gas field were mentioned as 0.9 and 2.3 TCF in the editions of 2006 and 2007 of Pakistan Energy Yearbook. Strangely in the edition of 2008 and 20099 these figures have been shown as 0.54 and 1.5 TCF respectively without providing any explanation.

Table.2 **Major Oil Fields of Sindh**

Units: Million US Barrels

Name of the Field	Operator Company	Estimated Recoverable Reserves	Cumulative Production	Balance Recoverable Reserve
Zamzama	BHP	11.68	5.02	6.66
Bobi	ODGC	11.564	5.174	6.390
Chack-66 NE	OGDC	2.86	-	2.86
Dars and Dars Deep	OGDC	10.227	-	10.227
Kunar	OGDC	25.13	16.703	8.427
Kunar Deep	OGDC	5.777	-	5.777
Lashari Centre	OGDC	11.024	10.335	0.689
Pasakhi. Pasakhi NE	OGDC	37.015	29.029	7.986
Qadirpur	OGDC	10.114	2.868	7.249
Sono	OGDC	19.244	15.865	3.388
Tando Alam	OGDC	22.56	16.226	6.334
Thora	OGDC	31.2	17.982	13.218
Akri North	BP	6.111	5.919	0.192
Dhabi and Dhabi S	BP	9.108	7.648	1.46
Dhabi North	BP	7.498	5.919	1.579
Ghungro	BP	10.467	7.041	3.462
Jagir	BP	7.349	4.736	2.613
Khaskheli	BP	13.654	12.194	1.46
Laghari	BP	21.413	21.452	0.155
Liari and Liari Deep	BP	8.113	7.897	0.3
Mazari	BP	22.455	22.099	0.356
Mazari South and Deep	BP	24.59	23.041	1.549
Sakhi, Sakhi Deep	BP	8.32	5.283	3.037
Tangri	BP	12.933	11.43	1.503
Zaur, Zaur Deep, South	BP	7.806	5.616	2.19

The above table also indicates that much of the oil reserve of Sindh has already been sucked out and the province would soon be without oil reserves unless some new major discoveries occur.

Contribution of Sindh in Oil and Gas Production of Pakistan:

According to Pakistan Energy Year Book 2008 (published by the Ministry of Petroleum and Natural Resources), Sindh produced 13.87 million barrels of oil (i.e. 38,000 barrels/day) that makes 56 percent of the total national oil production during 2006-07. For details, refer Table.3

Table.3 **Province-wise Oil Production in Pakistan, 2007-08**

Province	Oil Production (Million Barrels)	Percentage
Sindh	14.37	**56.13**
Punjab	6.51	25.46
NWFP	4.68	18.32
Balochistan	0.024	0.1
Pakistan	25.60	100%
Source: *Pakistan Energy Yearbook 2008, Ministry of Petroleum and Natural Resources, GOP*		

During the same year, Sindh produced 1,033,110 Million cubic feet of gas, which makes approx 71 percent of the total national gas production. For details, refer Table.4

Table.4 **Province-wise Annual Gas Production: 2008-09**

Province	Non-Associated Gas *(MMCF)*	Associated Gas *(MMCF)*	Total *(MMCF)*	%
Sindh	1,032,198	15,475	1,047,673	71.72
Punjab	66,728	9,560	76,287	5.22
NWFP	28,677	2,682	31,359	2.14
Balochistan	305,359	0	305,359	20.9
Pakistan	1,432,962	27,717	1,460,678	100%
Source: *Pakistan Energy Yearbook 2009, Ministry of Petroleum and Natural Resources, GOP*				

These tables highlight the following facts.

- Sindh is the largest oil producing province of Pakistan
- Sindh is the largest gas producing province of Pakistan
- Sindh and Balochistan together contribute more than 93 percent of the national gas production and therefore can be considered energy basket of Pakistan.

The same data source however reveals that Sindh and Balochistan consume only a small portion of their production. According to statistics, Sindh consumed only 46 percent of its production whereas Balochistan consumed just 29 percent of the gas it produced. Punjab utilized a staggering 852 percent against its production in the national output of gas. Higher consumption of energy is considered as major indicator of higher development. One can safely conclude that much of the development is centered in one province that consumes natural resources produced by other provinces. Table.5 provides revealing details of the consumption pattern of gas.

Table.5 **Province-wise Gas Production and Consumption Trend, 2008-09**

Province	Total Gas Produced *(MMCF)*	Total Gas Consumed *(MMCF)*	Ratio (Consumption VS Production in %)
Sindh	1,047,673	485,271	46
Punjab	76,287	649,938	852
NWFP	31,359	44,706	142
Balochistan	305,359	89,519	29
Source: *Pakistan Energy Yearbook 2008*			

The above table reveals interesting facts as under

- Sindh consumes less than the half of the gas against its production
- Balochistan consumes just around a quarter of the gas against its production
- Punjab consumes 8.5 times more gas than its production

These facts can also be gauged from the Table.6 showing sector-wise details of gas consumption in the provinces.

Table.6 **Sector-wise Consumption Trend of Gas in Provinces, 2007-08**

Type of Consumption	Province-wise Number of Consumers				
	Sindh	Punjab	Pakhtunkhwa	Balochistan	Total
Domestic	1,866,585	2,760,238	375,325	179,372	5,181,520
	36%	53%	7%	3%	100
Commercial	20,671	41,111	8,065	1,887	71,734
	29%	57%	11%	3%	100
Industrial	3,515	4,792	650	46	9,003
	39%	53%	7%	1%	100
Total	1,890,771	2,806,141	384,040	181,305	5,262,257
	36%	53%	7%	3%	100

Source: *Pakistan Energy Yearbook 2008*

There are also sharp disparities within the provinces where developed urban and peri urban centers are the major consumers of the gas and most of the gas producing areas do not have access to gas even for domestic use.

State of Human Development in the Oil and Gas Producing Areas: Estimated value of oil produced from Sindh at the rate of US$ 50/Barrel comes around 55.5 billion rupees per year. In spite of that, the larger part of rural Sindh which produces this wealth of resources is far behind in development indicators. Practically the federal government has all controls over the oil and gas fields located in provinces. The Federal Government doles out 12.5 percent royalty to provinces based on the well head price. The amount becomes part of provincial income in the annual accounts. There is no policy which may ensure that the oil and gas producing talukas/districts should also get a certain part from that royalty. That's why oil and gas producing talukas/districts of Sindh and

Balochistan are conspicuous by poor indicators of human development. Major oil and gas producing areas of Sindh such as Badin, Nara taluka in Khairpur, Saleh Pat in Sukkur, Sehwan and Thano Bola Khan tlaukas in Jamshoro and Johi taluka in Dadu are mostly under developed and communities surrounding the oil and gas field live in primitive ages. Data on state of human development shows that the major oil and gas producing districts of Sindh are suffering from worst state of human development.

- According to Human Development Report of UNDP (2003) Badin, the major oil producing district ranked at 60th out of 91 districts in the country. Under the same ranking only 3 districts of Sindh (including Karachi and Hyderabad) found place in top thirty districts of country on Human Development Index. The same report placed Rural Sindh lowest among all urban and rural areas of all provinces ranked on Human Development Index. The report also shows similar trend for Balochistan. According to the report Blochistan has 12 districts among the last 30 districts ranked in the country. Whereas the top 30 districts on HD Index included only 3 from Balochistan. Ironically Dera Bugti was the last on Human Development Index in the country. Dera Bugti is home to the largest natural gas field "Sui" of the country.
- Millennium Development Goals Report 2006 of the Government of Pakistan also indicates similar trend of human development in the hydro carbon producing districts of Sindh. Table.6 shows ranking of three major oil and gas producing districts of Sindh against key development indicators

Table.6 **MDG Ranking 2005 of oil and gas producing districts (out of 98 Districts)**

District	Indicator-wise Ranking			
	Net Primary Enrollment	Literacy Rate	Immunization	Water Supply
Khairpur	57	37	78	26
Dadu	70	43	53	56
Badin	47	60	60	43

This data leads to an important conclusion that the areas contributing wealth of oil and gas resources in the nationally kitty, do not receive their due share in development. This is a major cause of resentment among the communities and civil society of Sindh and Balochistan. A responsible state has to make sure that all citizens should receive their justified share in development opportunities.

Employment: Local employment is another matter of serious concern. Oil and gas fields are mostly located in remote and underdeveloped areas. Oil and Gas companies have their head offices in big cities like Islamabad and Karachi where Sindhi local staff hardly makes a small fraction of their human resource. Former Minister for Petroleum, Mr. Amanullah Jadoon told National Assembly on 14th April 2007 that out of 11,613 employees in SSGC and SNGPL, Sindh's share was 3,613 whereas Punjab's share was 5,454.

The oil and gas companies often extend an excuse that they do not find qualified and experienced people from rural Sindh and Balochistan. This argument has lost its validity as the provinces now have reputed universities and technical institutes producing sizeable number of professionals with required qualification. Unfortunately the graduates of these districts do not get even opportunities like management trainee or auxiliary staff. Hence educated youth of oil and gas producing districts is deprived from learning and training opportunities in the companies. Table.7 shows two case studies on employment of a multi-national oil and gas company operating in Sindh.

Table.7-A **Statistics of local employment in a company**

Office	Total Employees	Local Staff
Islamabad	60	2 (3.3%)
Karachi	176	10 (5.6%)
Field	204	175 (85.7%)

Source: *Personal Contacts*

Table.7-B **Statistics of local employment in a company**

Office	Total Employees	Local Staff
Head Office	225	15
Field	300	20

Source: *Personal Contacts*

The situation is not much different in other companies and can easily be generalized. The Petroleum Exploration & Production Policy 2009 also makes it obligatory on companies to invest in the training of Pakistani employees. The amount obligatory in this regard is mentioned in Table.8.

Table.8 **Amount to be spent on Training**

Phase of Operation	Amount per year (US$)
Onshore Zones	
During Exploration	25,000
During Development and Production	50,000
Offshore Zones	
During Exploration	50,000
During Development and Production	250,000

Source: *Petroleum Exploration & Production Policy 2009*

This amount can be used to build capacity of unskilled or semi-skilled locally hired human resource. Hence the excuse of unavailability of trained local human resource would lose justification. Statistics on employment in the sub-contractor companies are equally pathetic. Oil and gas companies outsource most of their work through output based sub contracts and their contractors often do not comply with the company policies. These sub contractors are mostly non locals and they hire most of their staff from other areas, thus depriving local youth from even low paid jobs. Catering companies are a good example to cite, where even waiters and cooks are brought from big cities. Other technical and semi-technical contracts such as communication systems, drilling, construction, security, transport etc are also outsourced. These sub contractors are almost all non-locals. They absorb a large number of employees which do not appear on the company's payroll and are often non locals. Field staff which is mostly low paid labor is somewhat considered as it is not feasible to bring them from other provinces or urban areas. A small number of such low paid employees are hired through local influential as a bribe to them. Companies making tall claims of investing in local human resource flagrantly violate their own policies.

Directorate General of Petroleum Concessions (DGPC) of the Federal Ministry of Petroleum and Natural Resources is responsible for overall employment regime of these companies. The Annexure.3 of the Petroleum Exploration & Production Policy 2009 reads "employment programs for Pakistani nationals shall be agreed upon with DGPC on an annual basis as per guidelines issued from time to time." Regrettably the Islamabad based DGPC has never taken up this issue with the companies. Such guidelines are never made public and local communities or civil society is never consulted on such policies. No company has displayed any such policy on their websites neither any could be found on the DGPC's website. In brief, the overall share of local communities in jobs is dismally low. Interestingly Article XVII of the Petroleum Concession Agreement require companies to gradually replace expatriate staff with nationals but does not ask for replacing nationals with locals as they become available. The present share in employment from the oil and gas producing areas is hard to justify. It is in the business interest of the companies to address this issue which is otherwise bound to create problems for their operations. Apart from that, it is moral and professional obligation of the companies to invest in development of local human resources enabling them to compete for mid level and senior positions in the companies. Some of the companies have made some appreciable investments but on a negligibly small scale.

Community Development: Article XXIX of the Petroleum Concession Agreement (PCA) makes it obligatory for the oil and gas companies to undertake social welfare programs in the concession areas. These programs are designed in consultation with the local administration. Under the Petroleum Exploration & Production Policy 2009, the size of amount to be spent on social welfare has been linked with the volume of hydrocarbons produced from the area. An amount of US$ 30,000/lease year has also been made obligatory during exploration. The amount increases substantially on commercial production. The details applicable on Sindh province are provided in Table.9.

Table.9 **Amount to be invested in Community Development Programs**

Production Rate (Barrels of Oil Equivalent per day (BoE/day)	**Amount per year (US$) for Zone II and III**
Less than 2,000	37,500
2,000-5,000	75,000
5,000-10,000	150,000
10,000-50,000	300,000
More than 50,000	525,000

Source: *Petroleum Exploration & Production Policy 2009*

Although the amount makes a small fraction of the hefty profits from the concession areas yet substantial for underdeveloped remote areas. However, only few companies manage this portfolio professionally. The persons hired to manage this fund are often urban based corporate bosses who have little understanding of local communities and their issues. As a result of that, the fund is often utilized under influence of local power lords or the local administration, to keep the books straight. Communities or local civil society is often kept at arms length or only superficially involved in decision making on community development fund. These powerful local lobbies often seek their own petty interests and do not allow poor communities to benefit from such fund. As a result of that, companies are also deprived from the benefit of developing friendly relationship with local communities through Corporate Social Responsibility (CSR) investments. Although some of the multinationals have developed proper systems for this portfolio but majority of companies still lack professional approach. National companies particularly have a poor track record on this account. Discretionary corporate funds are mostly spent on advertisements, gala dinners, sports events and other such entertainment oriented activities in urban centers. These funds can also be utilized for development of local communities thus earning good will for business. Wise use of these funds can make difference in the lives of poor communities surrounding the wealth generating concessions and also make the communities friendly to companies.

Some of the industry wizards argue that they are there only for business and community development is government's responsibility. They totally forget that natural resources historically belong to people and not the governments or companies. Exploitation of their resources without their consent is violation of fundamental human rights of communities. On the other hand state also does not behave in a responsible manner to ensure judicious benefits to local communities in return of their wealth being extracted. When communities realize that their nature's endowment is being extracted and they continue to live in primitive ages, the reaction becomes violent. There are numerous examples e.g. Niger Delta in Nigeria and Sui in Pakistan from where industry has learnt a lot and practices are being changed now all over the world.

Production Bonus: According to Article XXIII of the PCA, the companies are required to deposit Production Bonus with the President at the commencement of commercial production. The article clearly mentions that the Production Bonus will be expended on infrastructural development in and around the Area (i.e. concession area). The amount of the Bonus is linked with size of production as mentioned in Table.9

Table.9 **Production Bonus**

Cumulative Production (MMBOE)	**Amount (US$)**
Within 90 days of start of commercial Production	600,000
Upon reaching 60 MMBOE (million barrels of oil equivalent	1,200,000
Upon reaching 120 MMBOE	2,000,000
Upon reaching 160 MMBOE	5,000,000
Upon reaching 200 MMBOE	7,000,000

Source: *Petroleum Exploration & Production Policy 2009*

The amount so far paid by the companies has never been returned to the oil producing areas. According to newspaper reports Government of Sindh has raised this issue with the Federal Government. According to GoS, various companies have deposited an amount of 2.39 billion rupees since 1996 on account of their production from the province[2]. It is strange that the amount is lying with the federal government without any justification. The amount must also have accrued substantial interest on deposits. According to another newspaper report[3] Ministry of Petroleum has agreed to transfer an amount of 2.39 billion to Sindh accrued against the Production Bonus. However Ministry of Finance has certain objections on transfer of Rs. 1.38 billion.

[2] Daily Kawish-Hyderabad, 20th January 2009
[3] Daily Kawish-Hyderabad, 30th January 2009

According to the news report, the Ministry of Finance had no separate account to deposit Production Bonus received from various companies till 2007. This account was separated only in November 2007. Hence the Ministry has no separate record of the amount under question till 2007. This is mind boggling that the Finance Ministry had no separate account for this head. Even if there was no separate budget head, there must be some documentation against each transfer in the account. Whereas the Ministry of Petroleum had the same record available that formed the basis of calculations for Government of Sindh. According to the same newspaper report, some 13 districts of Sindh would benefit from the Production Bonus. The district-wise projected amount is as follows. Khairpur Rs. 671 million, Dadu Rs. 514 million, Tando Mohammad Khan Rs. 43.9, Tando Allahyar Rs. 125.0 million, Badin 260 million, Thatta Rs. 120 million, Jamshoro Rs. 49.7 million, Ghotki Rs. 81.5 million, Matyari 25.2 million, Sanghar Rs. 31.2 million, Kashmore Rs. 31.1 million Jacobabad Rs. 10.7 million and Shikarpur Rs. 29.7 million.

Once the amount is transferred to these districts, the next question would be a policy to ensure that a part of this amount should also reach the talukas and union councils from where oil and gas is being produced. Judicious use of this money can bring substantial benefit to poor communities in the areas.

Environmental Obligations: Objective No. 7 of the Petroleum Exploration & Production Policy 2009 reads as “To undertake exploitation of oil and gas resources in a socially, economically and environmentally sustainable and responsible manner.” However the policy document does not outline any guidelines on environmental aspects. Environmental Protection Act 1997 provides overall framework of environmental regulation in the country. Under the Act, oil and gas exploration projects are subject to either Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA). Few multinational companies set a healthy trend of conducting quality IEEs and EIAs but with the passage of time this activity has been reduced to a mere ritual. A handful of consulting firms have perfected the art of creating EIAs and IEEs as per the wishes of companies. The fundamental problem with EIA is that, the study is financed and practically managed by the companies. EPAs are actually involved at the stage of public hearing and approval of the EIAs. Due to rampant corruption and lack of regulation capacity within the EPAs, the environmental regulation of oil and gas exploration projects is fast loosing its credibility and public hearings are no more considered as an effective accountability forum to critically screen EIAs. Most of the public hearings of EIAs are conducted in big cities far away from the communities subjected to the wrath of environmental violations. Sometimes companies transport a handful of local community representatives to attend EIAs who are often beneficiaries of the companies’ operations. Thus stakeholder participation from local areas remains nil for all practical purposes. EIAs are normally approved with some minor amendments for the sake of record. The EPAs have very limited in-house capacity to effectively review the EIAs as these studies involve variety of disciplines. EPAs also lack capacity of proper monitoring of compliance to stipulations of the EIAs. Human, technical and financial constraints are the major limiting factors that have rendered EPAs ineffective to check environmental violations by the companies. This scenario has provided enough space to the E&P companies to evade environmental obligations. Although, some multinational companies out of their internal checks and commitments under Corporate Social Responsibility (CSR) claim to uphold environmental sanctity of their areas of operation but the local communities have sever complaints of environmental violations. Some consulting firms disclose in confidence that in certain cases diagnostic studies conducted by the companies confirmed environmental violations but the same were hushed up by the management. Poor regulatory mechanism and weak civil society are key responsible factors that provide safe passage to companies with environmental violations. As a result of that, local communities pay the price in the shape of diseases, loss of productive land and pollution of their ground water.

Rights of the resource producing areas: Oil and gas resources are created through a natural process of millions of years and are therefore historical resources of communities living in the areas. However the state has taken over these resources in the name of national interest and the coin of natural rights has gone obsolete.

Various countries in the world have adopted different models of sharing benefits accruing from the oil and gas resources generated in their geographic boundaries. From Texas to Niger Delta, sharing of benefits and right over oil and gas resources has remained at the heart of conflict between federation and the federating units. The following examples would be helpful in understanding various models of sharing benefits.

Venezuela: According to the Constitution of 1999 (art.12), all oil and gas reservoirs are the property of the national government. States and municipalities do not have any property rights over the resources. It applies both on the on-shore and off-shore resources. According to the laws related to oil production, 25% royalty goes to states. 70% is transferred to those states where oil fields are located and the rest to the non-producing regions.

Brazil: In Brazil, the benefits are shared at the level of municipalities. Oil profits are shared with all states and municipalities through entitlement fund, according to quotas directly proportional to their populations (municipalities) and inversely proportional to their per capita income (states). In 1985, with the approval of law 7453, states and municipalities were entitled to royalties from offshore production at a rate of 80% split as follows; 20% for all states and municipalities, 30% for the bordering states and 30% for the bordering municipalities. In 1989, Law 7990 required that 10% of royalties from on-shore or off-shore production be sent to municipalities featuring installations for the loading and unloading of oil and natural gas.

Argentina: According to the formula, 21 percent of the revenue goes to the National Health Service and remainder is split 60-40 between the federal and provincial government. Much of this income going into federal and provincial treasuries is allocated to National Housing Fund, the Federal Road Fund, the Water Infrastructure Fund and the Transport Fund etc.

Canada: Canada's constitution explicitly vests ownership rights to natural resources (including oil and gas) with the provinces in which these are located.

At the most general level, both federal and provincial governments levy a *corporate income tax* on all for-profit, privately held companies doing business within their jurisdictional areas. These taxes, of course, also apply to firms active in oil and gas development and production. As far as *onshore* areas are concerned, the approaches used by all of the relevant jurisdictions (including the federal government) to collect revenues specific to oil and gas activities have evolved over time. The fundamental features of these revenue-collection systems, however, have remained largely unchanged. Firms make payments to the relevant government (that of the jurisdiction holding ownership rights in the oil and gas resources) for the acquisition of exploration rights (these payments are often called *bonuses* or *bonus bids*). These are one-time payments designed to secure not only exploration rights, but also their subsequent conversion into production licenses or leases to any oil and gas reserves discovered.

Since 1957 the federal government has funded out of its general revenues a system of *fiscal equalization* that provides transfer payments to the governments of provinces with low fiscal capacities to bring them up to an after-transfer fiscal capacity that is close to the national average. Other major transfers, such as for health, post-secondary education, and welfare, are very large (though not directly related to provincial oil and gas revenues) and also have an equalizing impact. Over the years, the treatment of provincial revenues from natural resources (including oil and gas) within the equalization system has varied markedly: from the two extremes of complete exclusion, to that of 100% inclusion. At the time of writing, the pendulum was firmly in the middle of its arc: 50% of provincial oil and gas revenues are currently included in the calculations that underlie the determination of equalization payments.

India: Articles 294-297 of the Constitution provide that the ownership of land and natural resources located within the territory of a state, vest with that state. Thus, the states own all of the petroleum resources found under the land in their territory. Such ownership of on-shore petroleum resources has been further recognized by the Central legislation on oilfields development and regulation. However this ownership is not absolute and is significantly restricted by the Central government's powers over resource management.

The industry, both upstream and downstream, is under the control of the Central government because of Article 246, which asserts that only Parliament may make laws with respect to matters enumerated in List I of the Seventh Schedule, of which Entry 53 is —Regulation and development of oilfields and mineral oil resources; petroleum and petroleum products. Natural gas, when found along with oil is treated as a petroleum product and when found un-associated is a mineral resource. Therefore, in either case natural gas is under the Central government's purview (and —gas and gas works, which is a state subject, does not include natural gas).

The Central Government has taken under its control all matters relating to the development of mineral oil and gas through the *Oilfields Regulation and Development Act (ORDA)*. With this Act, the Central Government reserves to itself the right to make rules for regulating the grant of oil and gas development leases in respect of any mineral oil or any area as well as conservation and development of mineral oils even though it may be an onshore resource and owned by the states. In particular, these rules may provide for, *inter-alia*, the collection of royalties, and the levy and collection of fees or taxes, in respect of mineral oils mined, quarried, excavated or collected.

The Petroleum and Natural Gas Rules, promulgated under the ORDA, lay down the terms and conditions for granting exploration licenses and development leases in respect of petroleum and natural gas. States may grant a license or lease for onshore oil and gas exploration and production but strictly in adherence to these rules. These rules recognize the states' ownership of petroleum extracted from within their boundaries, which entitles them to collect royalties, and to grant leases and licenses for exploration and extraction of petroleum. However, their powers are controlled by the Centre because the royalty is fixed by the Centre and any license or lease is granted only after the Centre's approval.

Pakistan: In Pakistan, oil and gas resources are effectively controlled by the Federal Government. The recently enacted 18th amendment in the constitution however promises larger share for the oil and gas producing provinces. The amended Clause 172 (3) says "Subject to the existing commitments and obligations, mineral oil and natural gas within the province or the territorial waters adjacent thereto shall vest jointly and equally in the Province and the Federal Government". The coming years would determine how this clause is effectively executed.

So far the provinces received 12.5% royalties and certain other proceeds. Article 161 of the constitution of 1973 reads "Natural Gas and Hydro Electric Power: Notwithstanding the provision of article 78, the net proceeds of the federal duty of excise on natural gas levied at well head and collected by the federal government and the royalty collected in the federal government, shall not form part of federal consolidated fund and shall be paid to the provinces in which the well head of natural gas is situated." Also the constitution puts the Liquid Petroleum Gas under the Part II of Legislative Lists. Council of Common Interest (CCI) is the constitutional body responsible to "formulate, and regulate policies" on the subject. However in violation of the constitutional provisions, Federal Government's Ministry of Petroleum and Natural Resources have been "formulating and regulating" policies on oil and gas. Directorate General of Petroleum Concessions (DGPC) has been authorized to invite bids and issue licenses to the oil and gas companies. The whole country has been divided in zones and blocks for the purpose and DGPC is the sole authority of this business. Provinces are no where consulted at any stage. The DGPC receives application fees and rentals as per the following rates.[4]

Application Fees

- Reconnaissance Permit - Rs 50,000
- Exploration License - Rs 100,000
- Development and Production Lease – Rs 200,000

[4] Petroleum Exploration & Production Policy 2009

Rentals

All holders of exploration licence are required to pay an advance rental charge at the following rates:

- In respect of the five years of the initial term of the licence; Rs.3500 per square kilometre or part thereof; or in respect of each year of the initial term of the licence; Rs.800 per square kilometre or part thereof;
- In respect of each renewal of the licence; Rs.5000 per square kilometre or part thereof; or in respect of each year of the renewal of licence; Rs.2750 per square kilometre or part thereof.

During the lease period, the following annual advance rental charges will apply:

- Rs.7,500 per square kilometre or part thereof covering the lease area during the initial lease period.
- Rs.10,000 per square kilometre or part thereof covering the lease area during the renewal period of a lease and further lease term extension.

Considering the number of active leases, this must be a substantial amount that also goes to the federal government.

According to the Petroleum Exploration & Production Policy 2009, companies required to pay Royalty at the rate of 12.5% of the value of petroleum at the field gate. This amount is transferred to the concerned province by the Federal Government.

Gas Development Surcharge is another source of income for provinces. Gas Development Surcharge is the difference between the prescribed price and the consumer's price. Price is determined by OGRA. The Gas Development Surcharge is levied under the Natural Gas (Dev: Surcharge) Ordinance, 1967. In accordance with the said Ordinance the Federal Government has to fix the sale price for consumers and prescribed price for Gas Companies on the basis of their fixed return. The difference between consumer gas price and the Companies prescribed prices as defined in the Natural Gas (Development Surcharge) Ordinance, 1967 is the margin available to the Government as Development Surcharge. The prescribed price of Sui Northern Gas Pipeline Ltd (SNGPL) and Sui Southern Gas Company Limited (SSGCL) is based on the following:

- Wellhead price of gas.
- Excise Duty at Well-head.
- Operation and Maintenance Cost.
- Depreciation.
- Return of Gas Company, 7.5% (SNGPL)/ 17% (SSGCL), on Assets.

During recent months government has been increasing the companies' price on the demand of gas companies but did not proportionally increase the consumer price to avoid public outcry. This has narrowed the difference between Prescribed and Consumer prices thus lowering GDS transfers to provinces. The Federal Government could also have absorbed this margin by lowering its taxes (excise duty) but the same was not done and small provinces' GDS income was eroded each time. According to a news report, Government of Sindh has recently taken up this issue with the Federal Government. According to Government of Sindh, the GDS received against the gas production of 1,000,415 MMCF was Rs. 24.01 billion in 2006-07. In the following year, the amount was reduced to Rs 14.86 billion in spite of the same level of gas production. Whereas in the following year, the projected receipts have been further lowered to Rs. 11.32 billion[5].

In the budget of 2008-09, Government of Sindh estimated the receipts of Rs 40.79 billion through oil and gas royalties and GDS. This makes hardly a fraction of what the province is contributing to the national exchequer through its oil and gas resources. Nevertheless the amount is substantial and should have made some visible impact in the oil and gas producing areas. Due to poor management of resources and absence of appropriate policies, oil and gas producing areas do not receive an assured part of this income.

These facts lead to a well placed demand of the people of Sindh that the provinces should get right over natural resources and not just royalties and surcharges.

Conclusion: Oil and gas resources are central to conflicts in the world. Local communities are at odds with E&P companies and governments on judicious sharing of benefits. Federations specially are under pressure from the federating units on sharing of revenues and natural resources. Pakistan has witnessed turmoil in Balochistan and a conflict is brewing in Sindh. Local communities are genuinely frustrated because not only they do not receive benefit from oil and gas revenues but are also deprived from employment opportunities in the industry. Pakistan may encounter serious political confrontation if the question of the ownership of natural resources is not prudently addressed on priority basis.

Recommendations

- Oil and gas resources should be recognized as provincial resources and provinces should be given right over these resources.
- All concession areas should be leased by provincial governments on their own terms and conditions. Provinces may pay royalty to the federal government.
- Pending Production Bonus should be issued to concerned areas and spent through a transparent mechanism which ensures at least 50% of the amount to

[5] Khokhar Akhtyar, Daily Kawsih-Hyderabad, 23rd January 2009

be spent in the concession areas and remaining preferably in the adjoining areas. In future, Production Bonus should be released to the concerned district.

- The concerned authority should develop employment policy for oil and companies in consultation with local communities and civil society. This policy should be made public through mass media and be posted on websites of the concerned authorities and companies.
- People of the concession area villages or from the nearest district should be given first preference in all types of jobs (skilled, non-skilled and managerial) in oil and gas companies both in field and head offices. This will develop stakes of local communities in companies' business and they would facilitate companies operations.
- At least 50 percent jobs in all categories specially in management cadre should be given to local people available in the concession areas or in the nearest district if not locally available. Hiring from outside areas should only be considered when required human resource is not locally available. Details of all employees in companies should be made public on companies' websites.
- Hiring process in oil and gas companies should be made transparent and sensitive to local communities. All vacancies in oil and gas companies should be advertised in local newspapers of the concerned province and graduates from local educational institutes should be given preference. Their capacities can be built through training programs.
- Oil and gas companies should be made responsible to invest in employable human resource development in the area. After commercial production, the companies should initiate a local human resource development program in consultation with local stakeholders. The program should provide a time-bound comprehensive plan for developing local human resource through various initiatives e.g. establishing training centres, scholarships for technical education and internships.
- To make CSR fund more transparent, it should be made compulsory for each company to formulate a stakeholder committee from the concerned district to decide spending of CSR funds. The committee should have representation from communities in the concession areas, civil society of the concerned district, elected representatives, local administration and the company. Guidelines should be developed to ensure transparent process of identification, approval, execution and monitoring process of CSR projects. Details of CSR projects should be available on the companies' websites.
- An independent authority should be established at provincial level to oversee community related affairs in concession areas, receive complaints and redress them. This will also help companies to sort out local issues through a competent forum and would save them from bribing local influential. A district level sub-committee can also be established under such authority to handle local problems

at local level. Both, the communities and the companies would benefit from this arrangement.

- Environmental Protection Agency (EIA) should commission an independent committee of experts for making the IEE/EIA process effective. This committee should approve ToRs, monitor process, review documents and monitor compliance of the stipulations of IEEs/EIAs. Local representation from the concerned district should also be ensured during the whole process of any IEE/EIA/SIA. The expert committee should assist EPA in making the IEE/EIA process effective at all stages.
- All IEE/SEIA documents should also be available in local languages of the concerned area so that local stakeholders can effectively participate in the process.
- Public hearings of EIA/SIAs should also be held in the concerned district where local stakeholders can raise their concerns and suggestions before the body of independent experts.

Environmental Audits should also be made legal requirement to ensure effective compliance of the social and environmental commitments.