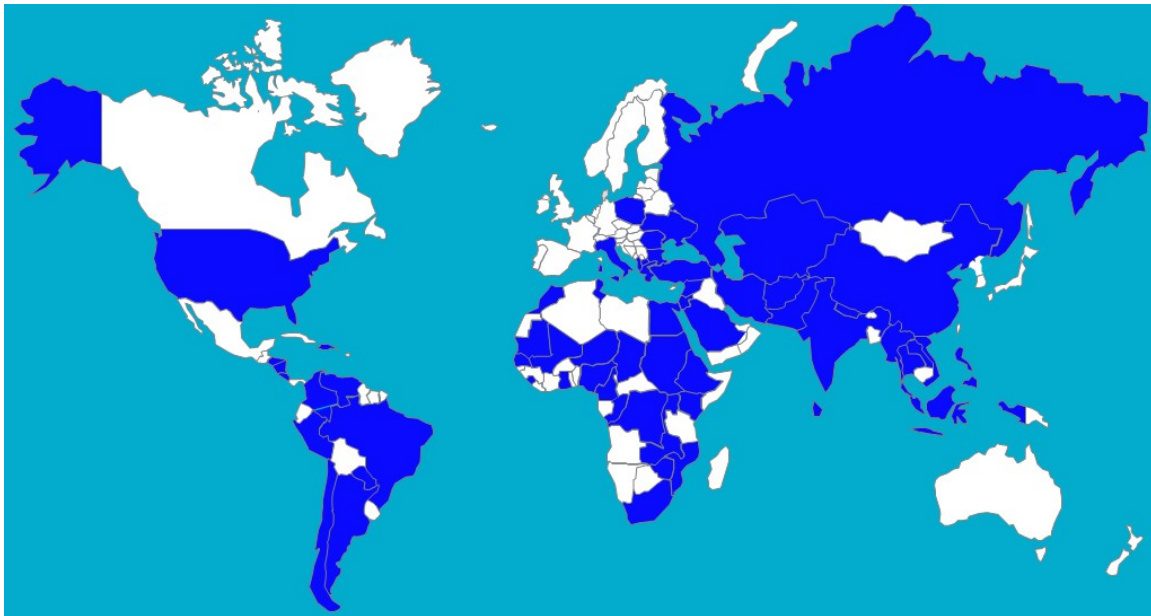


Birth Date: 29 July 1950
Nationality: Italian
Education: M. Eng. *Cum Laude* in Civil and Hydraulic Engineering, University of Rome, 1974.
Professional membership: ICOLD and United States Society on Dams (USSD)

Experience Summary

Alessandro Palmieri has 40 years of experience worldwide in water infrastructure planning and development, dams and hydropower projects in particular. He is internationally recognised as an authority on water resources infrastructure. Included in the list of the 60 most influential people ever in the dams and hydropower industry (October 2009). Awarded ICOLD's honorary membership in recognition of services provided to the international dam society (May 2010). Awarded the India Power Award (November 2010) as one of the three top international actors in the hydropower business in the year.

He has been the Lead Dam Specialist in the World Bank from 1997 to 2013, with overall responsibility on technical aspects of the Institution's portfolio of dams, including over 130 projects, with direct engagement in 86 water infrastructure operations. Before joining the Bank Mr Palmieri worked in the private sector for 22 years. During his career, he has been involved in the full development cycle of dams and hydro projects in 54 countries, in every continent.



Professional Experience

From October 2013

ICOLD, Chairperson of Committee on “Multipurpose Water Storage” (2013-2016).

Salini-Impregilo SpA, Water Infrastructure Adviser. Grand Ethiopian Renaissance Dam Project (6,000 MW, 10.5 Mm³ RCC dam, 17 Mm³ CFRD).

1997 to 2013 World Bank, Washington D.C.

World Bank experience, as the Institution's Lead Dam Specialist, included a significant role in the preparation, appraisal and/or supervision of water infrastructure and natural hazard management projects. Operations involved 37 new dams and over 20,000MW new hydros; rehabilitation and safety

assessment of over 100 existing dams and hydros; six natural hazard management operations, including Lake Sarez Risk Mitigation Project dealing with the highest natural dam in the world (600m high Usoy Dam, Eastern Pamir Range, Tajikistan).

Technical quality assurance, design review, implementation supervision, panel of experts orchestration, were the main tasks at project level; the full range of tasks included also environmental and social, fiduciary, and legal aspects of development lending. Training and skill enhancement programs for World Bank staff and Clients formed large part of the work program. Institutional components of projects covered training, regulatory frameworks, and policy dialogue.

The following sections list major projects and knowledge management activities undertaken while serving in the World Bank.

New Dams/ Hydropower projects

[Legend: HPP: Hydro Power Project; PSP: Pumped Storage Project; PH: Power House]

Project name	Country	Key features
Rogun HPP	Tajikistan	Technical and economic assessment, 335 m high central core rockfill dam and underground works for a proposed 3,600MW/22TWh-y HPP. Very complex dam foundation conditions (salt dome), sediment management challenge, complex spillway layout due to high head.
Rampur HPP	India	412MW/1.35TWh-y run-of-river hydroelectric project on the Sutlej River in Himachal Pradesh. Complex underground conditions along the 17km long headrace tunnel in highly tectonized Himalayan rock formations.
Cisokan PSP	Indonesia, Java	1040 MW pumped storage project. Upper and lower RCC dams (75m and 98m high respectively), underground PH (26W*51H*157L).
Lukovo Pole HPP	FYR of Macedonia	Flow augmentation to existing HPPs by means of the 20km long feeder channel and new regulating reservoir (38Mm ³ ; 85m high rockfill dam) for additional 163GWh/y.
Luhri HPP	India, Himachal Pradesh	38km long, 10.5m diameter headrace tunnel through highly tectonized rock formations on the Himalayas for a 612MW/ 2.24TWh/y HPP. Concrete dam (90m high) in highly seismicity zone and underground PH in complex formations.
Kandadji Multipurpose	Niger	8.4km long, 30m high embankment dam with 1600 Mm ³ reservoir on the Niger River main stem to provide: a) reliable flow of 120m ³ /s for the capital city Niamey; b) hydro electricity generation (629 GWh/y, 130MW); c) 40,000ha irrigation.
Lom Pangar HPP	Cameroon	46 m high RCC dam on the River Lom and associated regulating reservoir of 6 billion m ³ allowing incremental generation up to 6000GWh/y at existing and future plants on the Sanaga River.
Vishnugad Pipolkoti HPP	India, Uttarakhand	444MW/1696 GWh/y run of river scheme using a 237m head with a 65m high diversion dam in a deep and narrow gorge of the Alaknanda River. Underground works, located in highly tectonized, deep cover formations of the Himalayas, include sedimentation chambers, 17km long headrace tunnel, underground PH.
Khudoni HPP	Georgia	Proposed power plant on Inguri River for a total capacity of 700 MW. The power plant is associated with a planned 200 m high concrete double- arch-gravity dam . Construction started in 1979 and was stopped in June 1989.
Dasu HPP	Pakistan	Run of the river HPP on the Indus River, located 240 km upstream from Tarbela Dam. Staged development from 1,080 MW (7,500GWh) to over 4,320 MW (18,000GWh) at completion. Dasu Dam would be a 242 m high RCC structure, with crest length of 570m; seismic safety is an important aspect. The structure would be designed to pass the probable maximum flood of 50,360 m ³ /s and with sluices to flush Indus River sediment yield.
Nam Theun 2 HPP	Lao PDR	Inter-basin transfer HPP, 1070MW/ 6000 GWh/y, 3,900 Mm ³ reservoir impounded by a 40m high RCC dam. Nam Theun 2 was a milestone in the Bank's re-engagement in the hydro sector and involved extensive technical reviews.
Bisri Dam	Lebanon	128 Mm ³ reservoir for Greater Beirut water supply to be impounded by a 74 m high central core earth-rock dam. Complex foundation conditions include 100m lacustrine deposits and active faults. Seismic stability, including potential liquefaction is a main design aspect.
Kafue Lower Gorge HPP	Zambia	140m high CFR dam on the Kafue River for a 750MW HPP intended to use the outflows from the existing Upper Kafue project and exploiting the remaining 200 m of head in the lower part of the Gorge to generate 3000 GWh/y.
Water Supply Reservoirs	Bulgaria	Rehabilitation of 50 year old Studena Dam (concrete buttress, Noetzli type, 53m high), and completion of construction of three dams for water supply: Neikovsti (asphalt core rockfill, 42m high), Plovdivsti (asphalt core rockfill, 47m high), and Luda Yana (central core earth-rock, 51m high).
Pwalugu Multipurpose	Ghana	Regional development project including: irrigation (5,000ha), renewable energy (48MW; 145GWh/year), flood management, fisheries (3,000 ton/year), and water supply. Earth-rock dam with central concrete body hosting PH and spillway. Dam height 41m, total length 1,600m.

<i>Wuxikou Flood Mitigation Dam</i>	China	Wuxikou Reservoir, located on the main stem of Chang River with a storage capacity of 487Mm ³ , part of the flood protection system of Jingdizhen City. Secondary purposes are hydropower (32MW, 84GWh/year) and domestic water supply. Concrete gravity dam (46m, and 470 m long).
<i>Tina River Hydro Development</i>	Solomon Islands, Guadalcanal	First major hydro project in the Solomon Islands. 70m high roller-compacted-concrete (RCC) dam located in a narrow gorge with a 12MW peak capacity power plant. Considerable geological complexities and uncertainties required extensive options assessment and targeted investigations.
<i>Racibor Flood Mitigation Reservoir</i>	Poland	The Racibórz Dolny dry polder, with a retention capacity of 185 Mm ³ , is intended to reduce flooding in numerous villages and towns along the Odra River between Racibórz and Wrocław. The proposed dry polder is created by a system of frontal and side embankment dams, 7-10 m high and with a total length of 22 km.
<i>Tumarin HPP</i>	Nicaragua	Privately developed HPP (253MW) for the economic growth of the Atlantic region of the country and generation of renewable hydro-electricity (1162GWh/y) meeting 30% of national demand. 60m high main concrete dam and right wing central core rockfill dam, 20m high.
<i>Ribb Dam</i>	Ethiopia	Central core rockfill dam, 83 m high, 800 m crest length, and 235 Mm ³ reservoir. Located on the northern side of Lake Tana sub-basin, on Ribb River, its reservoir will allow irrigation of 8,000 ha.
<i>Tarbela IV HPP</i>	Pakistan	Tarbela Dam is located about 60 km northwest of Islamabad in Haripur district of Khyber Pakhtunkhwa province. A key piece of the Indus Treaty between India and Pakistan, when completed in 1974, Tarbela represented an unprecedented dam engineering achievement. The main central core rockfill dam is 150m high and 2.7km long. The total installed capacity is 3,478 MW and it generates about 16,000 GWh/y of electricity covering 17% of total electricity generation of the country. The expansion would install another 1,410 MW on the existing Tunnel #4 adding about 3,840 GWh of energy during summer when requirements are highest.
<i>Renewable Energy I and II</i>	Turkey	The project supported private sector development of renewable energy schemes, including medium size hydropower projects of different type, on national river basins, all over Turkey. Design and implementation reviews included: Mentas (40MW), Kirgilik (23MW), Kalealti (15MW), Akkoi 1 (99MW), Oskan (25MW), Berkman (38MW), Gokkaya (30MW), Himmetli (27MW), Kocak (24MW), Avlicar (16MW), Goktas I (120MW), Goktas II (150MW).
<i>Trung Son HPP</i>	Vietnam	Project features an 85m high RCC dam on the Ma River impounding a 348Mm ³ reservoir. Trung Son HPP: 260MW/ 1050GWh/y. Hydrological safety and seismic stability were the key technical issues during project preparation.
<i>Diamer Basha HPP</i>	Pakistan	To be located on the Indus River, 315 km upstream of Tarbela Dam, Diamer Basha would be a 270m high RCC dam, impounding a reservoir of 9 billion m ³ , i.e. about 15% of the annual Indus flow. Total installed capacity of 4,500MW for an annual generation of 16,500GWh. Eight Francis units of 560MW each will be located in two underground powerhouses. Water regulation and sediment control will benefit downstream water infrastructure.
<i>Wanjazhai Water Transfer</i>	China	Major water transfer scheme aimed at improving land and water management in the northern Shanxi province. Civil works involved a diversion dam on the Yellow River at Wanjazhai (concrete gravity, 105m high, 896 Mm ³ reservoir), with a 1080MW HPP. Water conveyance tunnels for over 300km, five underground pumping stations and reservoirs.
<i>Xiaolangdi Multipurpose Dam</i>	China	Zoned earth and rockfill dam, 154 m high, 1,667m crest length. Reservoir (12.8 bm ³) purposes include: a) flood protection for 103 million people, b) control sediment accretion in the lower reaches of the Yellow River, c) hydropower, d) irrigation to 2 million hectares, domestic and industrial water.
<i>Halele Warebesa HPP</i>	Ethiopia	Located in the upper Gibe River, in the Omo River Basin, upstream of existing Gibe II and Gibe III HPPs. Scheme consists of an upper regulating reservoir of 3,300 Mm ³ at Halele, formed by an 85m high earthfill dam, with an underground HPP (96 MW). Lower Dam at Werabesa, 45m high RCC dam, 184 Mm ³ reservoir, with underground power station (326 MW).
<i>Gibe III HPP</i>	Ethiopia	Gibe III HPP, with a generating capacity of 1870MW, and the complementary Ethiopia-Kenya interconnection represent the backbone for future energy sufficiency and security in the emerging Eastern Africa Power Pool. Project features a 240 m high roller compacted concrete (RCC) gravity dam requiring placement of 5.6 Mm ³ of RCC. When completed Gibe III will be the highest dam in Africa. Spillway capacity is above 10,000 m ³ /s.
<i>Marmarik Dam</i>	Armenia	Marmarik dam is a 50m high central core earth-rock structure impounding a reservoir of 24Mm ³ for domestic water supply. Construction was interrupted in 1989, following a partial collapse of the embankment. Completion of the works was implemented in 2011 in the context of a national dam safety program.
<i>Tarnita-Lapulesti Pumped Storage Plant (PSP)</i>	Romania	With 1,000MW capacity, Tarnita-Lapulesti PSP will be the largest hydroelectric balancing system in Romania. The upper reservoir would be located on the Lapulesti plateau immediately above the existing Tarnita reservoir, of 70.5Mm ³ capacity, impounded by a 97m high double curvature concrete arch dam.

<i>Dnieprstrovskaya PSP</i>	Ukraine	Construction of the 2,300MW pumped PSP started in 1983. Due diligence in view of financial support of completion works involved dam safety and operational reliability aspects.
<i>Bujagali HPP</i>	Uganda	A 250MW HPP developed by the private sector, located on Dumbbell Island on the (White) Nile River, about 8 kilometers downstream of the Kiira Hydropower Plant on Lake Victoria. The layout features a composite 30m high, central core rockfill dam, with concrete portions housing power plant and spillways.
<i>Taoussa Dam</i>	Mali	Project would be located on River Niger main stem some 100 km upstream of Gao. Purposes: irrigation for food security; hydropower 12 MW; navigation; counteract desertification; create a regional development pole. Project components: 30m high, rockfill dam, 800m long, 3bm3 reservoir, power plant, access road 180km.
<i>Nzoia Basin Flood Control</i>	Kenya	Feasibility study of flood mitigation storage dams on the Nzoia and Yala rivers in the Lake Victoria basin.
<i>Massa Dam</i>	Lebanon	Feasibility study for a 60m earth-rockfill dam for irrigation of the North Beeka valley.
<i>Asir Dam Water Supply</i>	Saudi Arabia	Water supply scheme with public-private partnership arrangement.

Rehabilitation of existing projects

Project name	Country	Key features
<i>Drin and Matt Cascade HPPs</i>	Albania	Dam rehabilitation and safety of three hydropower dams on the Drin River Cascade (Fierze, Koman and Vau I Dejes) and two hydropower plants on the Mat River Cascade (Ulza, Shkopeti) accounting for over 90% of electricity production in Albania.
<i>Dnieper and Dniester HPP</i>	Ukraine	Rehabilitation and modernization of nine hydroelectric plants on the Dniepr and Dniester cascades, which account for all hydropower production in Ukraine. Second phase of the Hydro Power Rehabilitation Project supported the refurbishment of 46 hydroelectric units and the implementation of an automated dam safety data management system.
<i>Naghlu Dam</i>	Afghanistan	Naghlu Dam was built in the mid 1960s to supply electricity to Kabul. The dam is a 100m high concrete gravity structure founded on sound rock. The 94MW house is incorporated in the dam body. Following rehabilitation of the generation units, the project aims at improving the safety of the civil works and dam safety management. Sediment management, known to contain UXOs, is a major issue.
<i>Angat Dam</i>	Philippines	Angat Reservoir (850 Mm3) supplies water to 90% of greater Manila (25 million inhabitants). The 131m high, central core rockfill dam was built in 1967. Safety assessment and reliability review highlighted priority measures including bottom outlet re-activation, spillway capacity increase, dam slope modifications for seismic stability, instrumentation.
<i>Dam Operation Improvement and Safety</i>	Indonesia	National program on 65 dams, mainly embankment type, with heights ranging from 10 to 125 m. Program covered: a) Dam Operational Improvement and Safety Works and Studies; b) Operations & Maintenance Improvement and Capacity Building; c) Reservoir Sedimentation Mitigation; d) Dam management improvement.
<i>Water Resources Improvement</i>	Albania	Rehabilitation of dams, and irrigation/ drainage infrastructure in 14 irrigation schemes located in the Drini-Buna and Semani river basins. Reservoirs range between 0.2 and 53 Mm3.
<i>Inga I and II HPPs</i>	Congo DRC	Rehabilitation of generation units and civil works of Inga I and Inga II (combined installed capacity 1,775 MW) including concrete and embankment structures, feeder canal sedimentation management, instrumentation. Feasibility of Inga III HPP.
<i>Dam Safety Project</i>	Armenia	National dam safety program included 83 irrigation dams to address major safety deficiencies and operation improvement. Dams are mainly of the embankment type with heights ranging from 10 and 83 m. Program included extensive training and capacity building of dam operators.
<i>Taunsa Barrage</i>	Pakistan	Taunsa Barrage, on the Indus River main-stem, was completed in 1958 to control water flow for irrigation (950,000 hectares) and flood management. Rehabilitation works addressed: a) energy dissipation zone; b) gates; c) barrage structure and its foundations; d) instrumentation and monitoring.
<i>Dam Rehabilitation and Improvement</i>	India, four states	Rehabilitation and modernization works on 223 dams and capacity building of relevant institutions in Kerala (31 dams), Madhya Pradesh (50), Orissa (38), and Tamil Nadu (104). Hydrological assessments, asset management and emergency preparedness plans, floodplain mapping, public awareness campaigns.
<i>Kainji HPP</i>	Nigeria	Rehabilitation and harmonization of hydro generation units (installed capacity 760MW), rehabilitation of auxiliary services, upgrading of instrumentation and monitoring system, improvement of the flood warning system.
<i>Krasnodar Dam</i>	Russian Federation	Feasibility study of safety improvement rehabilitation works. Hydraulic fill embankment dam with reinforced concrete upstream facing. Completed in 1973, the dam is 11.4km long and 21m high, impounding a 1,700 Mm3 multipurpose reservoir (flood protection, irrigation, drinking water supply, fisheries, navigation).

Dam Safety Assurance

Project name	Country	Key features
Aral Sea Basin Water & Environment Management	Kazakhstan, Kyrgyz, Tajikistan, Turkmenistan, Uzbekistan	Safety assessment of ten dams in the Aral Sea Basin (Amu Darya and Syr Darya basins) in Central Asia. Dams included Nurek (Tajikistan), 300m high rockfill, highest in the world, and Toktugul (Kyrgyz), 215m high concrete gravity. All of the dams are of high hazard as they impound large storage volumes, and they are in most cases located above densely populated areas.
Tuyamuyun Dam	Uzbekistan-Turkmenistan	Tuyamuyun hydrosystem, on the Amu Darya, is the major source of water for Karakalpakstan and Khorezm region. Total storage capacity is 4.200 Mm ³ , reservoir complex consists of earthfill dams, spillway capacity is 12.890 m ³ /s, 150 MW power plant. Potential Failure Mode Analysis (PFMA) was used to identify and prioritize safety improvement measures.
Hirfanli Dam	Turkey	Inclined core rockfill dam completed in 1960. Maximum dam height is 82 m, reservoir capacity is 5.75 bm ³ . Dam safety measures involved spillway channel maintenance and instrument installation.
Gilgel Gibe Dam	Ethiopia	184MW HPP on the upper Omo River Cascade. Dam safety review revealed the need to improve instrumentation and monitoring interpretation.
Nagarjunasagar Dam	India, Andhra Pradesh	At 126 m, Nagarjuna Sagar Dam is the highest masonry dam in the world. Gross reservoir capacity is 11.56 bm ³ . Total length of the dam is 3.4 km. The central part is made of masonry, left and right banks are made of earthfill. Dam safety measures concerned deferred maintenance, leakage reduction, and instrumentation revamping.
Shanghai Qing Cao Sha Reservoir (QCSR)	China	A 500Mm ³ reservoir named after the island, in the Yang Tze estuary, on which it is located. Reservoir's purpose is to stock and supply raw water to the City of Shanghai. Water front embankments are realized with jet-grouting-improved hydraulic fill; maximum height is 10m. Safety review covered geotechnical and regulatory aspects.
Bakhra Dam	India, Himachal Pradesh	225m high concrete gravity dam on the Sutlej River storing up to 9.3 bm ³ of water for multiple purposes (electricity, irrigation, drinkable water). The hydraulic jump-type stilling basin operates under an unusually high head and scour risk management was the key issue of the safety review.
Mohale Dam	Lesotho	Mohale is a 145 m high, concrete faced rockfill dam (CFRD). The body of the dam is made of quarry blasted basalt. Foundations are in sound basalt. The dam experienced significant cracking of the upstream concrete deck soon after first reservoir filling in March 2006. Safety assessment lead to a major revision of design and construction criteria of CFR dams during the ICOLD 2006 Congress in Barcelona.
Tajan (former Shahid-Rajace) Dam	IR of Iran	Double curvature arch dam, 133/427 m (high/length ratio), reservoir capacity 191 Mm ³ for multiple purposes (urban water supply, irrigation, flood mitigation, hydropower). Construction period 1987-1997. Monitoring during first reservoir filling showed satisfactory performance of the work. Safety review highlighted the necessity of preparing and operating an emergency preparedness plan.
Vidra Dam	Romania	Rockfill dam impounding a 340Mm ³ reservoir feeding a 510MW HPP. Safety review was carried out on the occasion of reservoir emptying for equipment rehabilitation and showed satisfactory conditions of the 35-year-old works.
Yasyreta' Dam	Argentina-Paraguay	Binational hydropower project (3,100MW/ 20 TWh/y). A 800m long/ 35m high concrete gravity dam on the Parana' River and 65km of embankment close both arms of the river around the island of Yasyreta. Spillway capacity is 55,000m ³ /s. Safety review found satisfactory system in place, recommendations focused on instrumentation conservation plan.
Naptha Dam	India, Himachal Pradesh	Naptha is a concrete gravity, 63m high, dam on the Sutlej River diverting flows to the 1,500MW Natpha-Jakri HPP. Construction was completed in 2002. Independent dam safety inspections are an important element of project's O&M.
Dam Safety TA	Zimbabwe	Identification of priority actions for safety assurance of 25 dams and preparation of a national Dam Modernization and Operation Improvement Program.
Dam Safety TA	Brazil	Technical assistance to the national Dam Safety Regulator (ANA) to deliver its functions over a portfolio of over 3,000 large dams. Develop and review norms, standards, regulations, guidelines and manuals. Monitoring inspections and evaluation, reporting, and communication of findings. National Dam Safety Information System.
Mahaweli Restructuring	Sri Lanka	Safety assessment and rehabilitation plan of Victoria (122m high, concrete arch dam), Kotmale (87 m high, rockfill dam), Randenigala (94m high, rockfill), Maduru-Oya (43 m high, rockfill). Sedimentation management plans.
Coal sector project	India, 3 states	Coal mine sector reform operation; geotechnical and hydrological safety assessment of mine overburden dumps in 8 mine sites.
Irrigation rehabilitation	Peru'	Irrigation sector reform operation; safety assessment of four dams following El Nino floods. San Lorenzo, earthfill, H=57m; Poechos, earthfill, 48m; Tinajones, earthfill, 42m; El Frayle, double curvature arch, 74m.
Kura River Basin	Azerbaijan	Safety assessment of Mingechevir and Shemkir dams, constituting a 18,700 Mm ³ water storage system for multiple uses.

Natural Hazard Management

Project name	Country	Key features
Lake Sarez Risk Mitigation	Tajikistan	Comprehensive risk assessment, monitoring and warning system for 14,000 Mm ³ Lake Sarez, located at 3,100 masl in the Pamir Range of Gorno Badakshan. Landslide-formed lake, natural dam height averages 600m. The landslide dam is inaccessible by road. The project established a reliable monitoring and warning system, trained communities at risk in emergency preparedness and response, and identified engineering options for long-term solutions.
Natural Hazard Management	Romania	Improving management of tailings facilities to reduce pollution from contaminant spills into the Danube River and Black Sea. Flood and Landslide (rural) and Bucharest Earthquake (urban environment) preparedness. Rehabilitation of 13 dams.
Wenchuan Earthquake and Barrier Lakes	Sichuan, China	Risk management of barrier lakes in the context of post-disaster recovery following the Wenchuan Earthquake that struck on May 12, 2008.
Post Hurricane Reconstruction	Dominican Republic	Landslides and dam rehabilitation, sedimentation management following Hurricane Mitch.
Hunza Landslide Dam	Pakistan	Emergency risk management advise to GOP in relation to massive landslide (170 Mm ³ , barrier height about 135 m) occurred at Attabad, Hunza Valley (4 January 2012) causing loss of human lives and property, and completely blocking the Hunza River and the Karakoram Highway (KKH) - the only road link between Pakistan and China.
Koshi River Floods	Nepal and India	Emergency risk management advise to GOI following breach of 1,100m of left bank dyke upstream of the Koshi Barrage and change of Koshi River course.

Knowledge Management Activities**Books/ Monographs**

- 2001 "Benefit Sharing from Dam Projects" The World Bank, Washington DC.
- 2002 "Regulatory Frameworks for Dam Safety" The World Bank, Washington DC.
- 2002 "Stakeholder Involvement in Option Assessment" The World Bank, Washington DC.
- 2003 "Reservoir Conservation, the Rescon Approach" The World Bank, Washington DC.
- 2003 "Benchmarking and Good Practice for Dam Licensing", The World Bank, Washington DC.
- 2004 "Framework for policy and decision-making on dam and hydro plant rehabilitation and uprating", The World Bank, Washington DC.
- 2007 "Addressing Climate Change-Driven Increased Hydrological Variability in Environmental Assessments for Hydropower Projects – a Scoping Study", The World Bank, Washington DC
- 2008 "Adaptive Management for Climate Change in Water Resources Planning and Operation", The World Bank, Washington DC
- 2008 "Indirect Economic Impacts of Dams" Academic Foundation, New Delhi.
- 2010 "A Grande Energia" – chapter 1 of Itaipu Binational Anniversary Volume, Sao Paulo, Brazil.

Selected Publications/ Journal Articles

- Palmieri (1984): "A Case History about the Application of Pre-Reinforcement in the Excavation of Tunnel Portals in Weathered Rock", ISRM Symposium, Cambridge, U.K.
- Palmieri, D. Moy (1985): "Influence of Residual Rock Mass Structure on Slope Stability at Bumbuna Falls Hydroelectric Project", ISRM Symposium MEXROC 85, Zacatecas (Mexico).
- Palmieri al. (1993): "Stabilisation measures for the completion of a tunnel in residual soils", AGI XVIII Symposium, Rimini (Italy).
- Palmieri, J.D. Hardwick (1994): "Model Studies for using a Spillway Waterway as the Headrace Tunnel to a Power House" MTM Conference, Budapest - July 1994.
- Palmieri (1994): "Dam Engineering Contribution to the Reduction of the Cost of Water. The R.C.C. Concept" Regional Seminar on Optimisation of Water in Agriculture. Ministry of Water and Irrigation - Amman, Jordan. November 1994.
- Palmieri (1997): "Financing large dams projects – key issues of a modified approach" 19th ICOLD Congress, Florence-Italy, May 1997.

- Palmieri A., Shah F., Dinar A. (1998): "Reservoir sedimentation and the sustainable management of dams"* World Congress of Environmental and Resource Economics, Venice, Italy, June 1998.
- Hoek E., Palmieri A. (1998): "Geotechnical risks on large civil engineering projects"* World Congress of International Association of Engineering Geology and the Environment; Vancouver, BC, Canada, September 1998.
- Palmieri (1998): "Dam project portfolio – Past and present in the Bank",* World Bank's Water Week, Annapolis, MD, December 1998.
- Palmieri (1999): "The role of technical solutions in the context of international development and dam investments"* International Atomic Energy Agency, Vienna, Austria, January 1999.
- Palmieri (1999): "International Perspective on Dam Safety"* Dam Safety Project Stakeholder Workshop, New Delhi, November 1999.
- Palmieri (2000): "Dam Safety and Reservoir Conservation" Workshop on Dams, Development and the Environment",* Sao Paulo, Brazil, March 2000
- Palmieri A., Annandale G. (2000): "Reservoir Sustainability"* Seminar on Reservoir Sedimentation, HR Wallingford, Oxfordshire, UK, June 2000
- Palmieri (2000): "Dam Safety and Reservoir Conservation in World Bank operations"* 20th USCOLD Lecture Series: Dam O&M issues, Seattle, WA, July 2000
- Palmieri A., Shah F., Dinar A. (2001): "Economics of Reservoir Sedimentation and Sustainable Management of Dams"* Journal of Environmental Management (2001) 61, 149-163
- Palmieri (2001): "Reflections on Dam Safety",* Water Power & Dam Construction Magazine, May 2001
- Palmieri (2004): "Big Lender- Quality in World Bank Lending",* Int. Journal on Water Power & Dam Construction, August 2004.
- Palmieri (2005): "Getting World Bank funding for your Hydro Project",* Hydro Review magazine, October 2005.
- Palmieri (2006): "Rights, Risks and Responsibilities in Dam Development",* British Dam Society, London, February 2006
- Palmieri (2008): "Water – A Global Contestation",* Chapter 5 of Civil Society Yearbook 2008.
- Palmieri (2008): "Lake Sarez Risk Mitigation Project",* Proceedings of the Symposium for the 50th Anniversary of the China Institute of Water Resources and Hydropower, Beijing, October 2008
- Palmieri (2008): "Safety of small, rural dams and barrier lake management",* Disaster Risk Management in East Asia and the Pacific, World Bank paper 16, November 2008
- Palmieri (2009): "Where should one start for developing good water infrastructure projects?"* Int. Journal on Water Power & Dam Construction Yearbook 2009
- Palmieri (2012): "Managing Financial Risks for Uncertainty",* International Symposium on Practices and Trends for Financing and Contracting Tunnels and Underground Works, Athens, March 2012

International Congresses/ Conferences

Session chair, keynote speaker, panel member in over 40 international events; see list in [Annex C](#).

Policy Dialogue Events

- Dams and Development Project (2001-2006),* UNEP-lead, 5-year multi-stakeholder process; involving 4 Forum Meetings, 8 Thematic Symposia, 8 Steering Committee meetings.
- OECD Meeting of the Parties on Export Credit conditions to Hydropower Projects,* Paris 2005.
- Global Water Futures Projects,* Washington DC, March 2005
- Roundtable on Transboundary Water Management,* Berlin December 2005
- SACE, Italian Export Credit Agency,* Rome, February 2006
- Africa Hydropower Summit,* Johannesburg March 2006
- Sava Basin Development,* Zagreb November 2006
- Nile Basin Forum,* Addis Ababa November 2006
- Global Perspectives on Dams,* University of Yale, December 2006
- Dam Safety and Sedimentation dialogue at WAPDA,* Lahore, May 2007

Hydropower Sustainability Protocol, IHA Conference, Antalya May 2007

World Bank Financing of Water Infrastructure, Italian Overseas Trade Agency (ICE), Rome November 2008

Water Framework Directive and Hydropower, Berlin June 2007

Risk Informed Dam Safety Workshop, Nan Jing June 2010

Mekong River Development Convention, Bangkok September 2010

Safeguard Policies dialogue with government of China, Hefei May 2010

Convention on the Protection and Use of Transboundary Watercourses and International Lakes, UNECE Rome November 2012

Pre-World Bank professional experience

1995-1996 Hydea S.r.L. Consulting, Italy

Technical Director Overseas Projects

Municipal Support Program (Palestinian Territories): capacity building to local engineers for infrastructure development.

Integrated Development of the Jordan Rift Valley (Jordan- Israel): Feasibility of Red Sea- Dead Sea Canal and induced development opportunities.

National Water Resources and Irrigation Master Plan (Eritrea): post-conflict re-assessment and planning for water resources management and development.

Ariari Land Reclamation (Colombia): feasibility and detailed design, large scale irrigation and drainage project.

Kaedi Irrigation Plant (Mauritania): rehabilitation of civil works, controlled spate irrigation scheme.

Channel Maintenance Program (Egypt): improved operation and management of Egypt's (irrigation) drainage network.

Urban and Rural Development (San Salvador).

Djibouti Urban Master Plan (Djibouti).

1975-1995 Studio Pietrangeli S.r.L., Italy

Engineer's Representative

Greater Beirut Water Supply Reconstruction (Lebanon): Damage Assessment Study of water supply network, treatment plants, pumping stations, reservoirs; tender design and supervision of reconstruction works.

Bumbuna Falls HPP (Sierra Leone): chief designer, rockfill dam, H=87m, spillways, power house and hydraulic steel structures including a radial gate 7*7.5m operating under a hydraulic head of 95m. Planning and supervision of hydraulic model tests of the plant waterways and of the hydraulic turbines. Shop inspections during manufacturing of the hydraulic steel structures.

Tana Beles Integrated Rural Development Project (Ethiopia): chief designer, Master Plan, Sectorial Studies, Final Design and Construction Supervision of infrastructures for agricultural development of the Beles Valley (2000,000 Ha; 80,000 inhabitants). Main works: Little Beles (H45m) concrete gravity dam and treatment plant, Beles concrete gravity weir, Water Supply network (L=245km), all weather road network (L=225km), Landing Strip (L=900m), Regional Hospital (132 beds), Land Reclamation (Rural roads and drainage channels) over 10,000 Ha, three irrigation plants (337 Ha), Pipe Factory, Agroindustries, Project Centres in the Beles valley and in Addis Ababa.

Rio Grande Pumped Storage Project (Argentina): detailed design and supervision of construction of underground excavations, rock slopes, dam foundations, interface design between electromechanical equipment and civil works for 750MW pumped storage hydroelectric project, including underground power house (W=26m; H=40m; L=105m), tailrace tunnel (A=206m²; L=5860m).

Project Manager

Mujib, Wala, and Tannur Dams (Jordan): analysis of basin-level alternatives, feasibility and tender design of three roller compacted concrete (RCC) dams for water supply and irrigation. Dam heights 58 to 67m, RCC volume 280,000 to 850,000m³.

Acheelos Water Transfer Tunnel (Greece): geotechnical design, TBM tunnel in complex sedimentary formations of Pindos Apennines, L=18.5km, D=6m; Preparation of the technical documents for the Construction Tender.

Lamas I HPP (Turkey): design of underground works (5.5km long, D=5m tunnel to be bored by TBM in karstic limestone) and Economic Viability Assessment of 41 MW HPP.

Matanza Flood and Pollution Control Project (Argentina): responsible for final design of flood control dams, river training works and pumping stations; technical assistance for construction tender.

Ancipa Water Supply Scheme (Italy): tender design of feeder channel's intakes, rehabilitation of 60m high concrete buttress dam, water supply scheme.

Fiora Dam (Italy): site investigations and feasibility study of 70m high rockfill dam and irrigation options.

Uribante – Doradas HPP (Venezuela): design revision of underground works, steel linings and slope stability of 300MW HPP.

Jassa Dam (Italy): site investigations and detailed design of 85m rockfill dam.

Arcighiaro Dam (Italy): detailed design of 80m high rockfill dam, blasting schemes and rock reinforcement for 50m high spillway's rock slopes.

South West Iron Mines Development Study (China): feasibility study of mines development, railway and harbour facilities.

El Cajon Hydroelectric Project (Honduras): excavation and support requirements of underground power house in karst limestone in the presence of hot water springs.

Guavio Dam and HPP (Colombia): tender design of 260m high rockfill dam, 30km tunnels and underground machine hall (1,000MW).

Assistant Chief Designer

Casteddu Weir and Tunnel ; Romana Dam; Buttute and Calambru Dams (Italy).

Salto Grande HPP and Alicura HPP (Argentina).

Weija Dam (Ghana)

Djoue' HPP (Congo Brazza)

Annex C: International Congresses/ Conferences

Legend: ICOLD (International Commission on Large Dams), USSD (United States Society on Dams), IAEG (International Association of Engineering Geology), LALA (International Impact Assessment Association), USCOLD (United States Committee on Large Dams), IWHR (International Water Resources and Hydropower).

IAEGE (Vancouver, November 1998)- keynote address

USCOLD (Seattle, July 2000) – invited lecture

ICOLD 20th Congress (Bei Jing, September 2000) – presentation

ICOLD 69th Annual Meeting (Dresden, September 2001) – panel member

Sustainable Management of Water Reservoirs (Cape Town, March 2002) - presentation

Canadian Dam Society (Victoria BC, October 2002) – invited lecture

3rd World Water Forum (Kyoto, March 2003) – session chair and panel member

USSD (Charleston, April 2003) – invited lecture

British Dam Society (London, July 2003) – invited lecture

Dam Management Seminar (Nan Jing, October 2003) – organiser and session chair

World Affairs Council of America (Alaska, December 2003) – invited lectures

World Water Week (Stockholm, August 2004) – panel member

US National Academy of Sciences (Irvine CA, October 2004) – invited lecture

German Dam Symposium (Weimar, October 2004)- invited lecture

Hydro 2004 (Porto, October 2004) – presentation and panel member

Sedimentation Workshop (New Delhi, February 2005) – presentation

World Water Week (Stockholm, August 2005) – panel member

Japan Committee on Large Dams (Kawasaki, October 2005) – invited lecture

USSD Conference (San Antonio, May 2006) – presentation

ICOLD 22nd Congress (Barcelona, June 2006) – keynote address

Hydro Vision 2006 (Portland OR, July 2006) – presentation

Symposium on Integrated Water Resources Management (Bochum, Germany, September 2006) – invited lecture

Nile Sedimentation Conference (Khartoum, November 2006) – session chair

Hydro 2007 (Granada, Spain, October 2007) – session chair

IAIA Conference (Perth, Australia, May 2008) – panel member
USSD Conference (Sacramento CA, July 2008) – presentation
IWHR 50th Anniversary (Bei Jing, October 2008) – presentation
Water India V (New Delhi, November 2008) – invited lecture
ICOLD 23rd Congress (Brasilia, May 2009) – keynote address
Hydro 2009 (Lyon, October 2009) – opening address
Performance of Dams during recent earthquakes (Dushanbe, Tajikistan, July 2009) – invited lecture
Hydro 2010 (Sarawak, Malaysia, March 2010) – opening address
ICOLD Annual Meeting (Hanoi, May 2010) – award and panel member
Hydro 2010 (Lisbon, September 2010) – panel member
India Power (New Delhi, November 2010) – award and presentation
Hydro 2011 (Prague, October 2011) – keynote address and panel member
Tunneling Symposium (Athens, March 2012) – presentation
ICOLD 24th Congress (Kyoto, June 2012) – opening address
Hydro 2012 (Bilbao, October 2012) – presentation and panel member
Hydro 2013 (Addis Ababa, April 2013)- keynote address and session chair
ICOLD Annual Meeting (Seattle, August 2013) – Technical committee chairperson
NZCOLD-AUSCOLD Conference (Rotorua, New Zealand, November 2013) – keynote speaker
IAEG XII Congress (Torino, Italy, September 2014)- keynote speaker
Hydro 2014 (Cernobbio, Italy, October 2014) – session chair and speaker