

SPORTS FACILITIES IN MALAYSIA: THE IMPACTS TO URBAN ENVIRONMENTS



**RESEARCH MANAGEMENT INSTITUTE (RMI)
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR**



**PROFESSOR DR DASIMAH BT OMAR
DR MAASSOUMEH BARGHCHI**

JANUARY 2012

Contents

1. Letter of Report Submission.....	iii
2. Letter of Offer (Research Grant)	iv
3. Acknowledgements.....	vii
4. Enhanced Research Title and Objectives.....	viii
5. Report.....	1
5.1 Proposed Executive Summary	1
5.2 Enhanced Executive Summary	2
5.3 Introduction	3
5.4 Brief Literature Review.....	6
5.5 Methodology	10
5.6 Results and Discussion.....	15
5.7 Conclusion and Recommendation	20
5.8 References/Bibliography	24
6. Research Outcomes	30
7. Appendix.....	33

1. Letter of Report Submission

Tarikh : 29 January 2012

No. Fail Projek : 600-RMI/ST/DANA 5/3/Dst (88/2010)

Penolong Naib Canselor (Penyelidikan)
Institut Penyelidikan, Pembangunan dan Pengkomersilan
Universiti Teknologi MARA
40450 Shah Alam

Ybhg. Prof.,

LAPORAN AKHIR PENYELIDIKAN “SPORTS FACILITIES IN MALAYSIA:
THE IMPACTS TO URBAN ENVIRONMENTS”

Merujuk kepada perkara di atas, bersama-sama ini disertakan 2 (dua) naskah Laporan Akhir Penyelidikan bertajuk “SPORTS FACILITIES IN MALAYSIA: THE IMPACTS TO URBAN ENVIRONMENTS”.

Sekian, terima kasih.

Yang benar,



PROFESOR DR. DASIMAH BT OMAR

Ketua

Projek Penyelidikan

2. Letter of Offer (Research Grant)

Surat Kami : 600-RMI/ST/DANA 5/3/Dst (88/2010)
Tarikh : 10 Disember 2010



Prof. Madya Dr Dasimah Omar
Fakulti Senibina, Perancangan dan Ukur
Universiti Teknologi MARA
40450 SHAH ALAM

Prof./Tuan/Puan

KELULUSAN PERMOHONAN DANA KECEMERLANGAN 11/2010

Tajuk Projek : Sports Facilities in Malaysia: The Impacts To Urban Environments
Kod Projek : 600-RMI/ST/DANA 5/3/Dst (88/2010)
Kategori Projek : Kategori G (2010)
Tempoh : 01 Disember 2010 – 30 November 2012 (24 bulan)
Jumlah Peruntukan : RM 5,000.00
Ketua Projek : Prof. Madya Dr Dasimah Omar

Dengan hormatnya perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan pihak Universiti telah meluluskan cadangan penyelidikan Prof./tuan/puan untuk membiayai projek penyelidikan di bawah Dana Kecemerlangan UiTM.

3. Bagi pihak Universiti kami mengucapkan tahniah kepada Prof./tuan/puan kerana kejayaan ini dan seterusnya diharapkan berjaya menyiapkan projek ini dengan cemerlang.

4. Peruntukan kewangan akan disalurkan melalui tiga (3) peringkat berdasarkan kepada laporan kemajuan serta kewangan yang mencapai perbelanjaan lebih kurang 50% dari peruntukan yang diterima.

Peringkat Pertama	20%
Peringkat Kedua	40%
Peringkat Ketiga	40%

5. Untuk tujuan mengemaskini, pihak Prof./tuan/puan adalah diminta untuk melengkapkan semula kertas cadangan penyelidikan sekiranya perlu mengisi borang setuju terima projek penyelidikan dan menyusun perancangan semula bajet yang baru seperti yang diluluskan. Sila lihat lampiran bagi tatacara tambahan untuk pengurusan projek.

Sekian, harap maklum.

"SELAMAT MENJALANKAN PENYELIDIKAN DENGAN JAYANYA"

Yang benar

MUSTAFAR KAMAL HAMZAH
Ketua Penyelidikan (Sains dan Teknologi)

Penyelidikan dan Inovasi (PDI) Universiti Teknologi MARA
Bilik Penyelidikan ST-101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Kelompok Penyelidikan ST-101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Penyelidikan dan Inovasi (PDI) Universiti Teknologi MARA
Bilik Penyelidikan ST-101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 5

s.k.:

1. Dekan, Fakulti Senibina, Perancangan dan Ukur, **UiTM Shah Alam**
2. Maassoumeh Barghchi, Ahli Projek, Fakulti Senibina, Perancangan dan Ukur, **UiTM Shah Alam**
3. Pn Rosnani Abdul Razak, Penolong Bendahari Kanan, Unit Kewangan Zon 17, **UiTM Shah Alam**

3. Acknowledgements

This research is the product of the support, assistance, and encouragement of a number of people to whom we would like to express our deepest gratitude as they were very special to us.

We are indebted to the Research Management Institute, Universiti Teknologi MARA Malaysia for granting financial assistance of Dana Kecemerlangan. We wish to extend our thanks to the staff of the Faculty of Architecture, Planning and Surveying and to all friends who provided various kinds of assistance and moral support to undertake the research in the Faculty of Architecture, Planning and Surveying. Their helpful comments, advice and suggestions have given us a most valuable learning experience and have made this research a reality.

There were many people who contributed to this research. We would like to thank all who participated in this research and also respondents who made the completion of this research possible.

We owe our greatest debt to our families for the support and provided us with a strong incentive to finish this work and we would like to say terima kasih to them for being very patient.

4. Enhanced Research Title and Objectives

Original Title as Proposed:

Sports Facilities in Malaysia: The Impacts to Urban Environments

Improved/Enhanced Title:

Sports Facilities in Malaysia: The Impacts to Urban Environments

Original Objectives as Proposed:

- 1) To review the scenario of Malaysian sports facilities in perspective with other countries like USA, UK and other countries.
- 2) To investigate the sports facilities in Malaysia and to assess the relationship between sports facilities construction and urban growth impact of the surrounding areas.

Improved/Enhanced Objectives:

- 1) To investigate the development of sports facilities in Malaysia.
- 2) To investigate the relationship between sports facilities' development and urban environment in Malaysia.
- 3) To make recommendations on the sports facilities constructed in Malaysia in the future.

5. Report

5.1 Proposed Executive Summary

The interest in sports studies around the world is growing and will continue to do so. The recent construction boom of stadiums and the relationship between the construction of new stadium and surrounding area have made it one of the most significant. In recent years sports stadiums have been built in other countries not only for their intended sporting purpose but also with the twin aim of stimulating urban area as economic and physical regeneration, urban development, urban catalyst and things of that nature. This research will investigate the sports facilities in Malaysia, the nature and scenario, the availability in different states of country and to find out the real place and ability of Malaysian sports facilities.

5.2 Enhanced Executive Summary

(Abstract of the research)

Currently there is tremendous interest in sport in Malaysia, although sport has only been considered as an industry in the last ten years. Sports facilities have improved rapidly, especially after the country hosted the 16th Commonwealth Games in 1998. Internationally, sports facilities are viewed as playing a new role in cities as catalysts for urban development or to regenerate decaying area of the cities. Such a role also provides better justification for public investment, since the provision of sports facilities requires huge amounts of money for construction, ancillary needs and maintenance. The increase in the amount of public money being spent on sports facilities in Malaysia and the proliferation of sports facilities in the country necessitate an investigation into the wider issue of potential benefits related to the development of sports facilities. The aim of this research was to study some existing sports facilities in Malaysia and to examine their impacts on urban environment. The research focused on the main sports facilities at state level in Malaysia. The findings revealed that there is a new trend in sports facilities construction in Malaysia which started in the mid-1990s. This has been for hosting events, to develop harmony and unite people in line with the Vision 2020 nation-building program and to create a sports culture in the country. The required sports facilities are decided according to urban hierarchies, the National Sports Policy provided by the Ministry of Youth and Sports, and the budget allocation for sports through five-year plans. While the Federal Government provides money for the construction of sports facilities, State and Local Governments each provide land and layout, respectively. The results of the town planners' perceptions survey were able to demonstrate the relationship of sports facilities to the urban environment. It is hoped that the study will provide a new perspective and new approach to realising the potential benefits of sports facilities development in Malaysia. Finally, the research adds more knowledge to the literature on sports facilities development, especially in Malaysia.

5.3 Introduction

This section provides an overview of the subject area of the research and outlines its structure. It consists of four sub-sections. Background of the study provides an overview of sports facilities development. The next sub-section addresses the problem statements, while following sub-section presents the aim, objectives and research questions. The final sub-section presents the scope and limitations of the study.

5.3.1 Background of the Study

The sports facilities in Malaysia have improved rapidly over the past years, especially after the country hosted the 16th Commonwealth Games in 1998. The 16th Commonwealth Games was the first ever held in Asia and the last of the twentieth century. It was also the biggest sporting event Malaysia has ever hosted. Currently there is tremendous interest in sports in Malaysia. However, improvements that have occurred are inadequate compared to the overall development of sports at international level (Government of Malaysia 1988). Sport in Malaysia has only been considered as an industry in the last ten years (Aminuddin & Parilah 2008). The budget allocation for sports development, under the Ninth Malaysian Plan (2006-2010), is more than double that of the allocation in the previous five-year plan period, as well, the various plans for sports endorse the government's seriousness and commitment towards the development of sports and a wave of sports investment in Malaysia (Government of Malaysia 2008d).

The development allocation for the Ninth Malaysia Plan of the total (RM620.8 million), 48.3 per cent (RM299.9 million) is considered for the construction of multipurpose sports complex (Government of Malaysia 2006a). In addition, according to the reports provided by the Ministry of Youth and Sports (2010), the Ministry have received allocation of RM2,470,907,510.00 for Ninth Malaysia Plan from the Economic Planning Unit and until October 2010, RM1,943,964,257.74 was spend. The allocation was different compare to the announcement in 2006; however, the Ministry asked for more allocation from the Economic Planning Unit. There are 643 new sports facilities provided by the Ministry of Youth and Sports under the Ninth Malaysia Plan, 452 sports facilities completed and the rest 163 and 28 sports facilities still under construction and in the planning process, respectively (Government of Malaysia 2010g).

Internationally sport is becoming more and more influential and it will continue to grow in importance as the world develops into a global village, sharing the English language, technology, and sports (Majumdar & Mangan 2005). Sport is influenced by the process of globalisation in several ways such as internationalisation of sports competitions, international diffusion of sports, sports mega events (Aminuddin & Parilah 2008), and emergence of international organisations (Aman 2005). The origin of modern sports, the new Olympic movement, was proclaimed in 1894 and the first competition was held in Athens in 1896 (Horne et al. 1999). Ever since then sports have emerged in their modern forms and the sports facilities have evolved into one of the great public building forms of the twentieth century, regarded, at their best, as an essential and positive element of civic life (John et al. 2007).

Nowadays an increasing number of developed and developing cities are promoting the cultural dimension – the arts, entertainment, festivals, leisure, tourism – and remaking cities as 'places to play' (Eisinger 2000). The rise of so-called 'entrepreneurial cities' has enhanced the competitiveness of cities within the framework of a globalising economy. According to Davies (2005, p. 3), "Sport has

transcended the boundary from being considered as an active leisure pastime to being recognised as having considerable social and economic influence in contemporary society.” However, the bricks and mortar approach, which started from US, has centred on culture, tourism, entertainment, and the arts (Frieden & Sagalyn 1989; Rosentraub 1996).

There are many research studies have been conducted on sports facilities and their impacts, both positive and negative, due to their large investment for construction, maintenance and ancillary needs. A number of these studies are reported in Ph.D. theses, such as those of Chapin 1999, Click 2009, Greenberg 2010, Mazzarella 2005, Santo 2005, Suzuki 2007, and Xia 2008; as well as in research articles (e.g., Ahlfeldt & Maennig 2010, 2009, 2007; Austrian & Rosentraub 2002; Baade et al. 2008; Baade & Matheson 2004, 2001, Baade 1996a, 1996b; Coats & Humphreys 2008, 2002, 1999; Davies 2008, 2005; and Gratton et al. 2005).

5.3.2 Problem Statement

In Malaysia the provision of sports facilities is based on the policy to have facilities for both high performance sports and mass sports as mentioned by National Sports Policy (Government of Malaysia 1988). However, considering to mass sports is a relatively recent phenomenon in the country and the Ministry of Youth and Sports has recently made it a priority to provide facilities for mass sports (Government of Malaysia 2008a) including the Kompleks Belia Dan Sukan (Youth and Sports Complexes), and the Kompleks Rakan Muda (facilities built under the Rakan Muda – Young Partners – scheme). These facilities are quite new, with the majority provided under the Ninth Malaysia Plan (2006-2010). The construction of the Rakan Muda complexes started since the Eighth Malaysia Plan and only the last two completed in the Ninth Malaysia Plan. In addition, there are 643 new sports facilities provided under the Ninth Malaysia Plan including community sports complexes, futsal courts, sports facilities in rural areas, and upgrading of the Youth and Sports Complexes at states (Government of Malaysia 2010g).

The purpose of this research was to explore the existing situation of sports facilities in Malaysia and to investigate the relationship between sports facilities’ developments and urban development in Malaysia. Therefore, the focus was on facilities which were completed at least five years ago and sports facilities for mass sports provided by the Ministry of Youth and Sports under the Ninth Malaysia Plan are not investigated in this research.

From the literature and a current review of the research topic, it has been found that several problems exist with regard to Malaysian and international situations. They are categorised as follows:

Firstly, the increase in the amount of public money being spent on sports facilities, RM1,943,964,257.74 2006-October 2010 (Government of Malaysia 2010g), and at the same time, the increase in the number of sports facilities in Malaysia necessitate an investigation into the issues surrounding the development of sports facilities. As mentioned earlier in this chapter, the budget allocation for sports development under the Ninth Malaysia plan was more than double of the allocation for the previous five-year period. More than two-fifths of the allocation was earmarked for the construction of multipurpose sports complexes (Government of Malaysia 2010g).

Secondly, there is very limited research on sports facilities in Malaysia. Even the National Sports Institute of Malaysia, an institution that supposedly focuses on sports research, has not embarked on any research into sports facilities (Government of Malaysia 2008e). Furthermore, no research has been carried out by the Ministry of

Youth and Sports on the subject (Government of Malaysia 2008a), although, according to National Sports Policy (Government of Malaysia 1988), its agreement is necessary for the construction of each sports facility. At the same time, there are very limited studies done in the form of theses or articles (Aminuddin & Parliah 2008). Instead, sports research in Malaysia has concentrated more on the areas of sports science, management, medicine and health (Government of Malaysia 2008e). As such, it is necessary to explore the topic of sports facilities in Malaysia.

Thirdly, one of the most frequent topics of discussion in the study of sports facilities universally has been the financial situation and justification for their investment, largely because of huge amounts of money required for their construction (Foreman 2003). There is often also a need for ancillary constructions, that are often built at public expense, with every provision of a new facility. In addition, sports facilities incur a high cost of maintenance, and it is very difficult for a sports facility to be financially viable without some degree of subsidy (John et al. 2007). It is more difficult especially for sports facilities that have been built for world class sporting events, that struggle to produce sufficient revenue to sustain annual operating costs after the event (Davies 2005). Thus, in one way and another, sports facilities represent a huge financial burden for local governments. This fact underscores the need to investigate the impacts of sports facilities development in order to enhance the efficiency and long-term benefits of such investments.

Fourthly, there is a recent trend to build sports facilities for the twin aim of stimulating growth in urban areas (Davies 2005; Suzuki 2007). On the other hand, to stimulate economic development it is necessary to have a large-scale development. Various trends and rationales can be used to support sports facilities' development. Recent shifts in the location of sports facilities from out-of-the city sites to central city sites provide new roles for sports facilities. Over the past 20 years, investment in sporting infrastructure at national level in cities was not primarily aimed at getting the local community involved in sport, but was instead aimed at attracting tourists, encouraging inward investment and changing the image of the city (Gratton et al. 2005).

5.3.3 Aim, Research Objectives and Research Questions

The overall aim of this research is to add to the knowledge of sports facilities development through a study of its impact on urban environment in the Malaysian context. The specific aim of the research was to undertake an exploration of the existing sports facilities in the Malaysia and to examine their impacts on urban environment.

The objectives were:

1. To investigate the development of sports facilities in Malaysia.
2. To investigate the relationship between sports facilities' development and urban environment in Malaysia.
3. To make recommendations on the sports facilities constructed in Malaysia in the future.

In consideration of the purpose and implications of the research objectives and to meet the aim and objectives of the research, the following research questions were posed:

RQ 1.1: What are the nature and trends of sports facilities development in Malaysia?

RQ 1.2: What are the sports facilities activities?

RQ 1.3: Where are the sports facilities located?

RQ 1.4: What are the sports facilities problems?

RQ 2.1: What intention/rationales did the government use in the construction of sports facilities?

RQ 2.2: How was the site selection process for sports facilities carried out?

RQ 2.3: What rationales were utilised to support sports facilities development in Malaysia?

RQ 2.4: What is the relationship between sports facilities and urban environment in Malaysia?

5.3.4 Scope and Limitations of the Study

In order to achieve the aim of the research, the research was to investigate the existing sports facilities in the Malaysian context concerning their nature, trends, activities, locations and users of the facilities, as well as development rationales, role of the government, site selection process and relationship to urban development. However, in accordance with the definition of sports facilities used for this research, the study focused on the main sports facilities at state level in Malaysia.

There were several limitations faced in this research. Firstly, was the language of secondary data, because most of the government documents and reports are written in Bahasa Malaysia, a language of which the researcher has little knowledge. However, the researcher got these documents translated by sending to the language centre. There were also checked by assistance of the supervisor after translation. Secondly, the officers in government agencies and town planners' perceptions were considered as part of the components of the research. Further, there were time and financial limitations to the effort to study all the impacts of different sports facilities.

5.4 Brief Literature Review

The purpose of this review is to examine relevant literature to establish the context of this research. It starts with the history of sports facilities, a review of recent sports facilities and development considerations. The history of sports and sports facilities in Malaysia are discussed in the subsequent sub-section.

5.4.1 History of Sports Facilities

In order to appreciate current and future issues involved in sports facilities, it is critical to understand how far sports facilities have evolved over time. "Traditionally the sports facility was a modest facility with a capacity of perhaps a few hundred, serving a small local community and forming part of the social fabric along with a religious building, and a town hall" (John et al. 2007, p.33). Sports facilities are one of the great historic building types, representing some of the very earliest works of architecture (Greek stadiums), some of the most pivotal (Roman architectures and thermae), and some of the most beautiful from the Colosseum in Rome to Olympic Park in Munich twenty centuries later. Ever since the new Olympic movement was proclaimed in 1894, sports have emerged in their modern forms and the facilities have evolved into one of the great public building forms of the twentieth century, regarded, at its best, as an essential and positive element of civic life (John et al. 2007).

Sports facilities have changed through the years from functional facilities, adapted facilities, state-of-the art facilities to centre of business and regenerating area facilities. Historically, the first generation of sports facilities aimed to cram as many spectators as possible with very few amenities, while in the second generation, they improved and provided greater comfort for spectators. Security became a central issue for the third generation (Aymeric Magne Stadiums Consulting Group [AMSCG] 2009). The concern for security might have started in the UK from the tragedy at Hillsborough, Sheffield in April 1989 when 96 football fans were crushed to death during a football match. The Lord Justice Taylor Report, which was extremely critical of the design and safety of the football stadium, recommended, among other things, the phasing out of standing terraces and general improvements in ground safety (Bully 2002).

Digital television, satellite communication and the Internet have turned sports facilities into a media-oriented spectacle. This global focus on sports and sports facilities, on the other hand, has increased the "pressure on cities to adopt an entrepreneurial stance to attract mobile global capital" (Silk, p. 777), and has changed modern sports facilities. In the recent years, sports facilities are considered to have a role in shaping new cities or regenerating decaying areas of old cities (Davies 2008). The new sports facilities developments serve consumer needs. They are accompanied by residential, commercial, retail and leisure complexes with efficient transportation system (AMSCG 2009). Therefore, sustainability is more significant in the new generation of sports facilities.

Most of the literature on sports facilities draws upon North American experiences as professional sports facilities there are very popular. In the US context, the involvement of a national sporting league with big crowds at each game and team franchises which are mobile between cities, is distinctive (Searle 2002). The construction boom in sports facilities started in the 1990s in America. These facilities were developed by local areas to attract professional sports teams and franchises from other cities and considerable public funds from local taxpayers' money were devoted to these projects (Thornley 2002). While in the US, cities compete with each other for sports investment, in the UK sports facilities are national public investment or funded by public-private partnership (Suzuki 2007). There is no power for cities in the UK to determine the use of tax revenues or to propose a local tax increase to subsidise sports facilities construction (Davies 2008). Most of the investment in the UK has been in terms of sports infrastructure for hosting mega events.

In the 1970s and 1980s, most countries' expenditure on sport expanded considerably with the rationale that sport made an important contribution to local communities in welfare terms (Gratton & Taylor 1991). On the other hand, following the 'bricks and mortar' approach over the past two decades, the single most popular city centre redevelopment project to emerge in urban America has been the sports stadium (Chapin 1999). In the UK, in the late 1980s, a second wave of sports investment began with a similar rationale. However, several cities built prestigious sports-led development, using enterprise-led development policies, to promote economic and regional development (Davies 2002; Jones 2001; Lawless 1990; Loftman & Nevin 1995).

In the British context, most of the cities following this strategy have been industrial cities facing economic decline. Further, to require new image and new employment opportunities (Gratton et al. 2005). Cities in the rest of Europe and Australia are different to the British and American ones. However, they were already major tourist destinations prior to hosting the Olympics and the construction of new stadiums. They were not facing the same problems of industrial decline, they were aiming to "transform the image of these cities and turn them into major world cities" (Gratton et al. 2005, p. 986). The "situation elsewhere in the world is equally ambiguous" (John et

al. 2007, p. 39). The sports facilities construction boom that hit North America in the 1990s started to spread internationally (Fried 2005) and led to a lot of research on sports facilities.

5.4.2 Recent Sports Facilities and Development Considerations

Currently there is a universal construction boom developing sports facilities (Fried 2005). These facilities are for hosting sports mega-events, such as the Olympic Games, the Commonwealth Games, or for smaller scale activities. The development of sports facilities requires vast amounts of money for construction, almost certainly with substantial public investments, and often involving much more money than is justified by cost benefit analyses (Atkinson et al. 2008). There is also a need for construction of ancillary amenities that are often built at public expense with every provision of a new facility. In addition, there is a high cost of maintenance and according to John et al. (2007) sports facilities require public subsidies.

However, despite a number of studies, there is still an ongoing debate about whether new sports facilities should be built with public funds (Sam & Scherer 2008). From a review of the current literature, it can be ascertained that the impacts of sports facilities and the ability to affect urban surrounding areas are dependent upon several considerations: location, context, culture, and usage directly influence the ability to achieve sustainability in sports facilities development (Barghchi et al. 2009).

5.4.3 History of Sports and Sports Facilities in Malaysia

Aman (2005) explains that the history of sports in Malaysia began from around the end of 19th century. It was mainly the European activity and gradually spread to the locals. The Malays had their own version of activities that are physical and sport-like in nature in pre-colonial Malaya (Megat Daud 2007). However, the British had a significant impact on modern Malaysia. According to Megat Daud (2007, p. 22), "modern, organised and structured" sports activities were a "legacy of the British colonial rule". Such activities were introduced as early as the first settlement in Penang from 1786 and in Singapore about 1819 (Brownfoot 2003). In Malaysia the first inter-state event was a cricket match between Penang and Perak in 1884, while the first football championship was held in 1889. Football was one of the first competitive sports to gain interest. However, as explained by Kim (1985), it was due to the exposure of the sport being played in the schools as part of the western educational package.

After independence in 1957, there was a renewed interest in sport in Malaysia, both as mass and competitive sport (Brownfoot 2003). The enthusiasm for sports was its role to achieve building a harmonious and unified nation (Kim 1985). However, Malaysia is a multi-racial and multi-religious society. Malays, Chinese and Indians, the three main ethnic groups, have different cultural backgrounds and are free to practice their culture, religion and languages. Therefore, in reality, it is impossible for Malaysia's most popular sports to bring together the country's different cultural communities. Though, as mentioned by Aman (2005), soccer and badminton each in its own way can be considered a national sport. However, people of all ethnic backgrounds enjoy soccer and badminton.

In the late 1960s the popular interest in sports was declining. Therefore, the government took the initiative to establish the Ministry of Youth and Sport in 1972, the National Sport Foundation in 1967, and the National Sport Council in 1972 (Megat

Daud 2007). Later, important steps in the development of sport in Malaysia included the introduction of the National Sports Policy in 1988, the Sports Development Act and hosting of the Commonwealth Games in 1998. These developments marked the beginning of a new era for sport in the country. In the past ten years, sport in Malaysia has come to be considered as an industry (Aminuddin & Parilah 2008; Megat Daud 2007).

Arising from the plurality of ethnic cultures in Malaysia, the government has sought to promote some common cultural practices as part of nation building. The aim of the National Sports Policy was to develop an active, health and fit society through sports and physical recreational activities, in line with the overall efforts of the government in nation building (Government of Malaysia 1988). Recreation and leisure activities, on top of other political, social and cultural activities, can provide a powerful influence in the integration of all ethnic groups for social well-being (Ainol 1997). On the other hand, sport has become more and more influential and it will continue to grow in importance, through the process of globalisation. Therefore, because of the rapid growth of sports and globalisation, developing countries could not avoid this trend (Barghchi et al. 2009). Further, according to convergence theory, developing countries cannot avoid the importance of sports and sports investment (Aman 2005).

The National Policy in Malaysia is a sport policy for all. It encompasses both high performance sport and mass sport to achieve national development, unity and continued stability (Government of Malaysia 1988). There is currently tremendous interest in sports and a wave of sports investment in Malaysia. The constant increase of the allocation for sports programmes by the government reveals the increasing importance placed on sport in the country. The total allocation for sports programmes from 1986 to 1990 was RM97 million, although only RM49 million was actually spent. Nevertheless, in the Sixth Malaysia Plan (1991-1995), the allocation was increased to RM179 million, to become the third highest programme allocation after the Public Housing Programme (RM803 million) and the Fire Services Programme (RM193 million) (Government of Malaysia 1991). More recently, the budget allocation for sports development, under the Ninth Malaysian Plan (2006-2010), RM620.8 million, was more than double that of the allocation in the previous five-year plan period (2001-2005), RM307.2 million (Government of Malaysia 2006a).

While in the Eighth Malaysia Plan, emphasis was given to the development of high performance sports programs, in the Ninth Plan (2006-2010) emphasis was placed on creating a sports culture among Malaysians to promote a healthy lifestyle, as well as to achieve excellence and recognition in sports at the national and international levels (Government of Malaysia 2006a). The Malaysian National Health and Morbidity Survey (Government of Malaysia 1997) had found that 70% of Malaysians did not exercise. In the Tenth Malaysia Plan (2011-2015) emphasis will also be placed on participation in sports and co-curricular activities in schools to contribute towards character building of students. To instill the active lifestyle culture amongst children, participation in at least one sports activity will be made compulsory for students in schools beginning in 2011 (Government of Malaysia 2010f).

In Malaysia, sports and the development of sports facilities have increased rapidly over the past decade, especially after the country hosted the 16th Commonwealth Games in 1998. As mentioned by Megat Daud (2007), local sport has grown to global proportions and it has had a major impact on the development of local sports management. Malaysia in 1998 was the second developing country to host the Commonwealth Games (Westhuizen 2004), 32 years after Jamaica in 1966. According to Muda (1998) Malaysia took advantage of the Commonwealth Games to launch the 'Vision 2020' policy aimed at achieving Newly Industrialised Country (NIC) status by the year 2020. From hosting the Games, Malaysia also gained a more positive image internationally (Muda 1998). The Games signified to the world that

Malaysia was on the path towards modernisation. Further, the Malaysian government used Kuala Lumpur 1998 to represent the culture (Silk 2002).

With the experience of 1998, Malaysia went on to organise other sports events such as the South East Asian (SEA) Games, the World Cup Hockey, Formula 1 Grand Prix and Motorcycle GP, and Le Tour de Langkawi. However, the danger of concentrating only on elite sports and sports events was emphasised by Megat Daud (2007), especially with regard to the increase of financial allocations and expenditure on sport made by the government, although the government does not dictate the direction of local sport.

5.5 Methodology

The purpose of this section is to provide a critical discussion of the approach and methods selected to develop the research activities needed to achieve the objectives of the research. In addition, the research protocol observed to maintain the validity and reliability of the research is described.

5.5.1 Research Process

According to Dasimah (2002), the process of defining the research questions is the most important step taken during the research. It requires a full understanding that the questions would provide significant clues regarding the appropriate strategies used. This involved a critical analysis of the literature framework in the first phase of the study. After phase one was completed, the second phase of the research, data collection, began. However, work on the literature review continued and the literature was updated until end of the research. The theoretical work of phase one continued to inform the work of the phase two and the findings in phase two informed the theoretical grounding of phase one. The analyses of findings led to the formulation of conclusions and recommendations, which was the last phase of the research.

5.5.2 Research Approach

This section discusses the main philosophical issues of this research. To understand the philosophical positioning of research is vital as it could help researchers to clarify alternative designs and methods for a particular piece of research as well as identifying which method is more likely to work in practice (Esterby-Smith et al. 1991). This is because different approaches serve different functions in the knowledge discovery process (Wing et al. 1998). Research can be classified based on three perspectives; namely, application of the research study, objectives in undertaking the research, and inquiry mode employed (Kumar 2005). From the perspective of application, a research study may be classified as pure or applied research; from the perspective of objectives, it can be classified as descriptive, correlational, explanatory or exploratory; and from the perspective of the inquiry mode practiced, it can be classified as qualitative or quantitative. In practice, most studies are a combination of different categories. For example while, generally research methods are divided into quantitative and qualitative methods, several researchers suggest that research should be conducted using both methods to achieve triangulation (Love et al. 2002; Ragin 1987).

The research described here is an applied exploratory research, using a mixed research design; this is a procedure for collecting, analysing and 'mixing' both

quantitative and qualitative data in a single study to understand a research problem (Bryman 1988; Creswell 2009, 2005, 2003). Mixed methods research is a research design where researchers incorporate components of both quantitative and qualitative research to achieve a comprehensive understanding of evidence, together with human experience (Johnson et al. 2007). This research strategy provides an alternative approach that enhances the efforts of both quantitative and qualitative research designs. Johnson, et al. (2007) suggested three reasons why researchers combine qualitative and quantitative research into a mixed methods strategy: using mixed methods gives researchers the opportunity to support a hypothesis or theory with evidence from both quantitative and qualitative methods; merging quantitative and qualitative analysis through mixed methods can generate a more productive analysis of data; using mixed methods enables the possibility for new ways of thinking that materialise from the two different types of data. While qualitative and quantitative research studies differ in many ways, they also complement each other (Neuman 2006). From the early stage of this study, it was found that the research would benefit by adopting both qualitative and quantitative methods. Reliance on a single method may be viewed with suspicion as there is insufficient data available on similar studies in Malaysia at present. Therefore, the success of this research depends to a large extent on the efforts taken to apply both qualitative and quantitative approaches.

5.5.3 Research Design and Methods

A research design is the logic that links the data to be collected, and the conclusions to be drawn, to the initial questions of the study (Yin 2009). The exploratory research approach attempted to achieve objectives of the research. It was used to obtain a general overview of sports facilities in the Malaysian context. Apart from having different philosophical perspectives, various empirical research methods also exist, both quantitative and qualitative in nature. As suggested by Yin (2009), research methods include experiments, surveys, case study, histories, and economic and demologic research. Each of these research methods has its own focus, discipline origin, and method of data collection and analysis. Further, data can be categorised either as primary data or as secondary data, according to the nature of the data gathered. This research employed a combination of quantitative and qualitative methods comprising questionnaire surveys and interviews.

5.5.3.1 Questionnaires

Compared to interviews, a questionnaire offers more anonymity, can be distributed over a wider geographical area and is less expensive (Kumar 2005). Consistent with the purpose and situation of this study, the wide coverage of the study area and time constraints, quantitative research via a postal survey was the primary method chosen to collect data. This approach has various advantages such as geographic flexibility at low cost and respondent convenience. Even so, the researcher was aware of the potential drawbacks to the use of a postal survey, such as low response rate, lack of opportunity for interviewer intervention, minimal assistance, and the need for a thorough check on mailing needs (Zamalia 2008). According to Sekaran (2003), there are some effective techniques which can be employed to improve the rates of response to mail questionnaires. For this research, a postal reminder and a telephone reminder was used. In addition, to encourage respondents, the researcher enclosed a self addressed free postage envelope.

5.5.3.2 Semi-Structured Interview

This research employed semi-structured interviews that were based on prepared interview questions. This technique has both flexibility and specificity. It allows new questions to be brought up during the interview as a result of what the interviewee says. The semi-structured interview is one of the most frequently used qualitative methods. Interviews may be unstructured or structured, and conducted either face-to-face or by telephone or online (Sekaran 2003). However, semi-structured interviews fall somewhere between these different levels of flexibility and specificity (Kumar 2005). Semi-structured interviews are flexible and provide insights into the interviewee's feelings, beliefs and motivations while containing a combination of closed and open questions grouped under different sections.

5.5.4 Sources and Methods of Collecting Information

Several sources and methods of collecting information were used to carry out this study. Based on a review of the principles and procedures of research methods, it was found out that this study depended on both primary sources and secondary sources of data, as described by Kumar (2005), and also tertiary sources as mentioned by Booth et al. (2003). The collection of data from multiple sources and through multiple methods is recommended to make data and methodological triangulation possible (Sekaran 2003).

Two different sets of questionnaires were developed for the study. The first set of questionnaires was mailed to the City Councils of the 13 state capitals in Malaysia (Appendix A.1), the Department of Youth and Sports, and Sports Councils (Appendix A.2). The second set of questionnaires was mailed to the Town and Country Planning Departments of the 13 states, the Ministry of Housing and Local Government, and the Master Plan Department of Kuala Lumpur City Hall (KLCH) (Appendix A.3). The mailed questionnaires method was applied because of the wide coverage of the study area, in addition to time/manpower constraints. Questions were designed to be easily understood; respondents were given time to think and answer them (Ahmad 1995). According to Creswell (2009), for a mailed survey it is important to identify the steps involved in administering the survey and for following up to ensure a high response rate.

Direct interviews were carried out with four key personnel from the Ministry of Youth and Sports, the Ministry of Housing and Local Government, the National Sports Council and the Department of Town and Country Planning. Information obtained from these interviews was triangulated with the data gathered from the postal survey, which was carried out during April and May 2010. The details of interviews are provided in appendices (Appendix B.1). Secondary data included archival records, official documents from the agencies involved, and also previous research carried out by other researchers on topics related to this study. The tertiary data were used during the earlier stage of research in order to restate what other researchers have said about the topic being investigated. The primary data collected for this research is discussed in the following sections.

5.5.4.1 Exploratory Questionnaire for Sports Facilities Managers and Town Planners in 13 State Capital City Councils, Heads of 13 State Departments of Youth and Sports and Sports Councils

The limited information available online about the existing main sports facilities in the 13 states of Malaysia was not enough to satisfy the objectives and aim of the

research. Further, there was limited research on sports facilities in Malaysia. Consequently, it was necessary to determine the planning data of the main sports facilities in the 13 states. The role of surveys is to study the situation factually and objectively (Dasimah 2002). Considering the situation and the limited time, a questionnaire in the especial format was designed to gather information that focused on background, issues and problems, and the impacts of the existing main 13 states sports facilities. The questionnaires were sent out by mail to the official addresses of the identified government agencies, together with a cover letter signed by the Coordinator of the Post Graduate Programme (Appendix A.7) and also an envelope addressed to the researcher. The questionnaires were sent to the City Councils of the 13 state capitals, specifically to the chief town planner and to the manager of the main sports complex in each state. There were two different sets (Appendix A.1; Appendix A.2): managers were only asked 13 questions on background and issues. The questionnaires for government agencies were addressed officially to the head of the agencies to ensure a formal collection of data.

The questionnaires were pretested in a pilot study carried out among managers of sports facilities provided by KLCH. The revised questionnaire was sent out by post on 8th June 2009. It was followed up by postal reminders together with another set of questionnaires on 15th July. Telephone calls were made as a second reminder for the respondents on 15th September, after Hari Raya celebration holiday. After the first contact with the respondents, 11 (22%) out of 52 completed questionnaires were returned by post. The response rate increased to 15 (28%) after the postal reminder and to 25 (48%) after the phone calls. The time lapse was three months from the time questionnaires were sent out. The questionnaire consisted of three parts of closed-ended questions with an option of specification, for further elaboration by the respondents. Part I focused on background information of the facilities, including name, year, capacity, function, location from the city centre, factors for selecting the location, rationales, activities, and the most used activity and facility. Part II concentrated on obtaining information about the issues and problems of the sports facilities. These covered the facilities' usage, income and profit, problems, requirement for further facilities, attendance rate, number of staff, and any changes in the land use and zoning after the construction of the sports facilities. In Part III, the respondents were asked to indicate their opinions about different impacts on a summated rating scale with one-directional axis for increasing agreement. The variables had previously been identified through the review of the literature and previous research on the possible impacts of sports facilities on their surrounding areas.

5.5.4.2 Exploratory Questionnaire to 13 Heads of State Town and Country Planning Departments, Ministry of Housing and Local Government, and the Master Plan Department of Kuala Lumpur City Hall

There are limited references available on the role of government, the site selection process and the relationship between sports facilities development and urban development in Malaysia. Therefore it was decided to gather the perceptions of town planners by sending out a questionnaire to specific government agencies in Kuala Lumpur and all 13 states responsible for formulating and administering all national policies relating to town and country planning. It was attempted to investigate town planners' general comments regarding sports facilities in the Malaysian context consists of three parts: sports facilities development, urban development and the relationship between sports facilities and urban development. The questionnaires (Appendix A.3) were addressed officially to the head of the agencies to ensure a formal data collection. Further, each questionnaire was attached with a cover letter

signed by the Coordinator of the Post Graduate Programme (Appendix A.7) and also an envelope addressed with the researcher's name. The questionnaires were sent out by post on July 17th 2009. They were followed by a postal reminder on 8th September 2009 and a phone reminder on September 30th 2009. Four responses (26%) out of 15 and a further four responses (totaling eight, or 53%) had been returned by post after the first postage and the postal reminder, respectively. Finally, 11 responses (73%) were returned, which can be considered as a relatively high response rate for this method of distribution.

5.5.4.3 Key Informant Survey

Qualitative methods focus on validity and draw their strength from the correspondence between the actual situation and the researcher's description, understanding and interpretation of the phenomenon (Low 1987). Triangulation is employed extensively by social researchers to investigate different aspects of the same phenomenon (Crawford & Christensen 1995). According to Zeisel (1984), reliance on a single method is increasingly viewed with suspicion because it may lead to fallacious conclusions, although this may depend on the type of research. Drawing from this view and in order to explore in depth the concepts of sports facilities development and the concepts of decision making in Malaysia, information was also gathered by direct interviews with the key players from government agencies. These people included: a) the Secretary-General of the Ministry of Youth and Sports, b) the Senior Principal of the Policy Division, Ministry of Housing and Local Government, c) the Head of Properties and Facilities Division, National Sports Council, and d) the Director of the Research and Development Division, Department of Town and Country Planning. The Ministry of Youth and Sports, in the current central administrative structure, is the central agency for sport in Malaysia (Aman 2005). The Ministry of Housing and Local government is the highest agency responsible for formulating and administering all national policies relating to town and country planning. The National Sports Council for high performance sport is the coordinating machinery in Malaysian sports; it works in tandem with the federal government and state governments.

Preliminary introductory phone calls were made to all of the above agencies in March 2010, followed by letters describing the scope of the research enclosed with a cover letter signed by the Coordinator of the Post Graduate Programme. Interview themes and questions were emailed to the official mail addresses in order to make appointments with specific officers. These were followed by telephone calls confirming appointments. All of the appointments were made during April and May 2010. The interviews were conducted personally by the researcher in a semi-structured manner based on a pre-formulated set of questions (Appendix B.2) which was adapted to the particular circumstances of each of the officers. The interview themes included: policy making, the changing role of sports facilities, review of sports facilities policy, Malaysia's sports facilities in a global context, future trends and hosting of international sports events. The interview sessions were recorded; the recordings were supplemented by notes taken by the researcher during the sessions.

5.5.5 Methods of Data Analysis

This study is based on the convergence of data obtained from both quantitative and qualitative sources. Data processing involves editing, coding and analysis of the data. According to Yin (1994), the researcher is encouraged to 'play with data' in exploring and developing a sense of what is worth analysing and how it should be analysed. Once the data was ready, a detailed analysis was carried out, using both descriptive

and inferential statistical procedures. The Statistical Package for the Social Sciences (SPSS) software versions 16.0 was used for the quantitative analysis. Qualitative data, as mentioned by Dasimah (2002), can be difficult and laborious to analyse and data categorising may be subjective. Views from scholars on research were drawn upon to assist in identifying the most appropriate methods for data analysis. The interviews data were first transcribed and then classified under the identified main themes. Further, the identified responses within different themes were integrated into the text. However, for analysing qualitative data, to go through the content analysis is needed (Kumar 2005). Results of the analysis for both the quantitative and qualitative data is presented as tables, figures and graphs, which present findings more effectively to readers. In order to mixing the data, the qualitative data from key informant interviews provide supportive information, as explained by Creswell (2009, p. 208), "the researcher is embedding a secondary form of data within a larger study having a different form of data as the primary database." Further, the data integrated in the findings.

5.6 Results and Discussion

This section presents the findings of data on the exploratory survey conducted concerning the main sports facilities at the 13 states of Malaysia, as well as on the exploratory survey on the relationship between sports facilities and urban development in the Malaysian context, and finally key informant interviews. The exploratory survey conducted regarding the 13 states' main sports facilities was structured to elucidate information on the background, issues and problems as well as the attitude of respondents toward the impacts of the existing sports facilities. Furthermore, there were secondary data available on the existing sports facilities. Besides, the research adopted triangulation using a combination of the exploratory questionnaire survey on 13 states' government agencies and key informant interviews.

5.6.1 Results

The research findings reveal that more than half, 53.9% (7), of the 13 states' main sports facilities were opened during 1995-2010. In addition, while 38.4% (5) of the existing sports facilities have had major renovation, all of this renovation has been done during 1995-2010. This is also to mention that, the rate of construction and renovation was higher during 1995-2004. This high percentage of construction and renovation underline the consideration and importance of sports facilities. This happened at the same time as hosting the 16th Commonwealth Games and the construction of sports facilities for that event. In Malaysia SUKMA Games are held once every two years in different states. It has been started since 1986. The first and second Games were held in Kuala Lumpur. However, following national trend, the increase in construction and renovation of sports facilities in the states has been due to hosting the SUKMA event.

In Malaysia there is new trend for sports facilities construction which has started in the mid-1990s. However, it is due to the changing the role of sports facilities within the past 15 years. Firstly, sports facilities are constructed for hosting events. Secondly, sports facilities are there to develop harmony and unite people in line with the nation-building program. Thirdly, sports facilities are there for creating a sports culture to get the local community involved into sports. Finally, Vision 2020 requires having development in all aspects.

The result of the survey reveals that all of the 13 states' main sports facilities are multi-purpose. They use for sporting and non-sporting activities. All of the sports facilities are used for national sports games, while 66.7% are used for international

sports games, national official government events and national seminars and rallies. National concerts, exhibitions, expose, family days and ceremonies were selected by 33.3%. All of the sports facilities have capacity of more than 1000 people. There are only 15.4% (2) out of 13, with the capacity of more than 5000 people.

Sports facilities are located within the city areas. In the National Urbanisation Policy (2006-2020) sports complex are considered to be provided for urban hierarchies at national growth conurbation, regional growth conurbation, sub-regional growth conurbation, state growth conurbation and district growth conurbation. The 80% of the data gathered for this research comes from the sports facilities in 10 or less than 10 km distance from the city centre. The most important factor for selecting the location of sports facilities is land availability as mentioned by majority of respondents. Further, this factor was strengthened through key informant interviews.

The majority of the respondents agreed on green-field rather than brown-field sites as optimal sites for sports facilities. Besides, while 72.7% (8) agreed on edge or out of city locations, there were comprehensive development area, deprived neighbourhoods, and urban regeneration areas selected by fewer numbers of respondents for the location of the sports facilities. None of the respondents agreed on city center locations for sports complexes which underlines a contrast with the international trend. This is due to culture of sports in Malaysia and nature of the existing sports facilities.

There were 75% (19) of the respondents who stated the income of the sports facility is not enough for maintenance costs. However, 83.4% (20) of the respondents mentioned to use tax money or having subsidy. It is supported through interviews that the sports facilities in Malaysia are not economy-oriented and there is the problem of high maintenance costs. In addition, lack of funds was quoted to be the most important problem of sports facilities selected by 52% (13) of the respondents.

The question on the problems of the sports facilities reveals that, lack of activities was stated as the second important problem mentioned by 40% (10). It was followed by lack of public use and areas not fully utilised both at the same rate of 32% (8). Through key informant interviews, lack of public use was mentioned to be due to culture of sport in Malaysia. There were 24% (6) who selected public transportation as a problem for sports facilities. This implies that lack of public transportation in 24% of the surveyed sports facilities. On the other hand, from the result it is obtained that all of the surveyed sports facilities have enough parking and are accessible.

More than half, 60% (15), of the sports facilities have increased in their attendance rate. This is while only 20% (5) stated that the existing sports facilities are not enough for the number people attending them. There were 76% (19) who were satisfied with the existing facilities believing them to be enough for the people living there. Although, there were 44% (11) believing that there is still a requirement for new sports facilities in the area.

The research findings reveal that the guidelines and planning standards for sports facilities are prepared by the Federal Department of Town and Country Planning under the Ministry of Housing and Local Government based on population and urban hierarchy for every level of community. On the other hand, the required sports facilities are decided by the National Sports Policy provided by the Ministry of Youth and Sports. Further, the budget allocation is dedicated to sports by the Government through five-year plans. While the Federal Government is more on providing money for sports facilities construction, the State and Local Governments each provide land and layout, respectively. State authorities propose land and decide about the site selection of sports facilities. In addition, the land sometimes comes from federal or local authorities or the private sector.

The states government always proposes the site. The location and provision of recreational and sports facilities are identified in the Structure Plan prepared by local authorities based on population and standards for target people. The guidelines and planning standards prepared by the Federal Department of Town and Country Planning are used by local planning authorities in controlling activities in land development for uniform, comfortable and safe execution.

Sporting events hosting was the main reason and rationale for sports facilities development in Malaysia. It was due to the national trend regarding hosting the 16th Commonwealth Games. Significantly, SUKMA Games are hosted every two years by different states. As mentioned by town planners, benefit to local community and social developments were considered as following the main rationales for sports facilities development. The other factors selected by fewer respondents included necessity for the city, local or city landmark, local physical development and local economic development. In addition, the results from other group of respondents strength that sporting events is the main rationale, selected by 96% (24), to support sports facilities development in the states. Other factors including benefits to local community and social development are considered by more than half, 56% (14), of the respondent. This is in line with the national sport policy in Malaysia which encompasses both high performance sport and sports for all or mass sport for all strata of the community.

The research findings on the urban development strategy in Malaysia reveal the importance of residential, commercial and industrial aspects. Furthermore, none of the respondents chose the entertainment-based factor. The findings reveal that the majority of the town planners thought positively of the sport-centre urban development in Malaysia. There were only 18.2% (2) moderately disagreeing and 9.1% (1) slightly disagreed. There were different types of development stimulated by sports facilities as mentioned by town planners. There are infrastructure, commercial, residential, informal sectors and entertainment ones, respectively. Accessibility was selected as the most important factor to improve the sustainability and to enhance the sports facilities impacts. It was then followed by public transportation, activities and the location of the sports facilities.

There were more than half of the town planners, 54.5% (6), who agreed on physical development as the role of sports facilities in their surrounding area. It was followed by social development, 45.5% (5), and economic development mentioned by 36.4% (4) of the respondents. In addition, the researcher assumed the perception of managers of sports facilities, town planner in the 13 states Capital City Councils, head of the 13 states' Departments of Youth and Sports and Sports Councils to be an important indicator for investigating the relationship between sports facilities and their impacts on their urban surrounding areas. The variables on the impacts were identified through reviewing the literature and researches done worldwide. The impacts are categorised into three main groups, economic, physical and social, each divided into positive and negative aspects. Figure 1 shows a comparison among these categories. Then the research was able to rank the type of impacts. It was shown in Table 1. The social impacts are the most effective among the positive impacts with mean of 5.45. This is followed by positive economic impacts at 5.34 and positive physical impacts at 4.93. On the other hand, negative social impacts are the least effective negative impacts which are at 4.12. The physical impacts by 5.04 are the most effective negative impacts, followed by economic impacts at 4.31.